UNIVERSITY OF EDUCATION, WINNEBA

FINANCING PREFERENCE OF MICRO, SMALL AND MEDIUM ENTERPRISES IN BOLGATANGA MUNICIPALITY OF THE UPPER EAST REGION OF GHANA

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JULY, 2020

DECLARATION

Student's Declaration

I, Michael Maribgore Nangena declare that this thesis, with the exception of quotations and references contained in published works which have all been identified and duly acknowledged, is entirely my own original work, and it has not been submitted, either in part or whole, for another degree elsewhere.

Signature: ……..

Date: ……

Supervisor's Declaration

I/we declare that, the preparation of this thesis was supervised in accordance with the guidelines laid down by the University of Education, Winneba and I confirm my permission to present it for assessment.

DR. EMMANUEL CARSAMER (**Principal Supervisor**)

Signature: ……..

Date: ……

DR. ERIC JUSTICE EDUBOAH (**Co-Supervisor**)

Signature: ……..

Date: ……

DEDICATION

I dedicate this work to my wife, Ms. Immaculate Agamolga Atoamah and children for their supports.

ACKNOWLEDGEMENTS

I wish to first of all, acknowledge the enormous supports, guidance, motivation and encouragements of my supervisors, Dr. Emmanuel Carsamer and Dr. Eric Justice Eduboah from the Department of Economics Education, University of Education, Winneba throughout the period of writing this thesis. To them, I remain eternally grateful and may the Good Lord bless them bountifully.

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Finally the contributions and supports of my mates and friends cannot also be underestimated. I am highly indebted to them all for their supports.

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ABSTRACT

The study investigated the financing preference of MSMEs in the Bolgatanga Municipality, the determinants of this financing behavior of MSMEs. The main objectives set out for the study were to: examine the financing preferences of micro, small and medium enterprises in the Bolgatanga municipality and also, analyze the factors that influence the financing preferences of micro, small and medium enterprises in the Bolgatanga municipality. A sample of 200 respondents was sampled through the simple random sampling technique. A cross-sectional data which was obtained through a structured questionnaire was used. The study used cross-sectional design involving descriptive research. The quantitative method using descriptive, logistics and ordered logistics regressions were used to analyze the data. The analyses showed that firms prefer internal finance over external finance and when external finance is required, firms choose informal finance first before semi-formal and formal finance respectively. It also revealed that gender, location, institutional supports, secondary education, firm's age (established and matured), firm's size (medium) and management training influence the firms' financing preference behavior. The major recommendation was that the government through the NBSSI and GTA should support MSMEs with management training programs to help them operate more formally.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The impact of micro, small and medium scale enterprises in Ghana can be viewed from their contributions to the reduction of unemployment and poverty as well as to the growth and development of the Ghanaian economy. According to the Ghana Living Standard Survey-3 (2002) as cited in Oppong et al, (2014), 92% of businesses in Ghana are SMEs and employ more than 60% of the labor force. This undoubtedly impacts positively in the reduction of unemployment rate thereby helping to mitigate its associated negative social vices such as armed robbery and prostitution. Considering the fact that these enterprises provide both direct and indirect jobs and incomes to those engaged in them, they thus contribute to the reduction of poverty in the Ghanaian society. Micro, small and medium enterprises again contribute to Ghana's Gross Domestic Product (GDP) following from the taxes and duties they pay from their domestic, export and import activities. Since most of these enterprises occupy about 90% of the market share in Ghana means they are the main source of government's revenue domestically (Ntiamoah et al., 2016). All these activities thus contribute to incomes and economic growth in the country. The National Board for Small Scale Industries (NBSSI) has for example, estimated that the contributions of these enterprises to income in the country stand above US$200,000 (Akugri, et al., 2015).

Considering the contributions of MSMEs to the Ghanaian economy, governmental and non-governmental institutions have implemented policies and programs over the years to promote a sustained growth of these enterprises.

In 1971, the Private Sector Advisory Group and the Abolition of Manufacturing Industries Law, Act 356 was passed. This effectively removed some price controls regimes that hindered the growth of private businesses including MSMEs.

In 1985, the investment code (PNDC Law 116) was also passed. This also promoted partnerships between local and foreign investors. Other policies aimed at assisting operators of MSMEs technically and financially have been implemented. Such policies include, the equipment leasing policy to SMEs to enable operators have access to the needed equipment for their activities, the mutual credit guarantee scheme which is aimed at making it easier for owners of MSMEs to access bank loans and the rural finance project which has the primary aim of assisting small scale farmers and artisans with long term credit are among some of the policy initiatives geared towards promoting MSMEs' growth in the country.

In 1981, the government through Act 434 set up the National Board for Small Scale Industries (NBSSI) to provide technical and other supports services to the enterprises to promote their growth. Before this, the Ghana Enterprise Development Commission otherwise known as the Office of Business Promotion was established in 1970. It is now called Ghana Enterprise Development Commission (GEDC).The Commission initially was mandated to empower indigenous entrepreneurs to take over from their foreign counterparts following the passing of the Alliance Compliance Order in 1970. It is now charged with the responsibility of implementing programs that will ensure the growth and development of small scale enterprises.

The Ghana Appropriate Technology Industrial Service (GRATIS) mandated to oversee the works of the Intermediate Technology Transfer Units (ITTUs) in the

country was also set up in 1987. GRATIS ensures the transfer of the right technology to small scale enterprises.

To solve the financial problem, Microfinance and Small Loans Center (MASLOC) and the World Bank which assists small scale enterprises with loan scheme were all set-up in 2006 by government for the purpose of assisting MSMEs to have access to the needed credit facilities for their operations (Oppong et al. 2014).

However, they are some barriers that limit micro, small and medium enterprises from taking full advantages of government policies. According to Alhassan and Sakara (2014), these barriers include, high bureaucratic processes which frustrate many managers from accessing government support services. Access to government support schemes involves meeting a well-established qualification criteria. The inability of managers of MSMEs to satisfy these set of criteria makes it difficult for MSMEs' operators to take advantage of these policies. Also, many managers of MSMEs have inadequate knowledge of the existence of government support schemes and therefore, are unable to take full advantage of them. Moreover, many managers of MSMEs are usually reluctant or unable to provide detailed and more credible information to institutions providing them with assistance due to their inability to keep good business records or fear of leaking business plans. This makes it difficult for the institutions to appropriately assess their nature and need for the right support. Finally, the over politicization of government support schemes to MSMEs also makes it difficult for many operators of these businesses to access them.

The support schemes as outlined above are expected to go a long way to resolve the technical and financial challenges which manifest in MSMEs' inability to access banks credit facilities so as to enhance their growth.

Despite the initiatives outlined above, many MSMEs still apply other sources of finance for their operations which are expensive and have implications on their growth. According to Osei Assibey et al., (2012), MSMEs' access to bank loans is low in the country which make them rely on informal finance for their activities.

To promote a sustained growth and development of micro, small and medium enterprises (MSMEs) requires a deeper understanding of the financing preferences of these enterprises. This study was therefore, set out to examine the financing preferences of MSMEs as well as the determinants of these financing choices in Ghana.

1.2 Statement of the Problem

The contributions of micro, small and medium enterprises to the socioeconomic development of the country cannot be overemphasized. The full benefits from MSMEs can be tapped if the growth of these enterprises is promoted. The growth of MSMEs is influenced largely by the financing options they employ for their operations. According to the pecking order theory by Myers and Majluf (1984), due to information asymmetry between managers and outside investors, firms will always prioritize internal finance over external finance and when need be for the latter, firms will choose debt over equity. Since MSMEs are not listed in Ghana, they can source for external finance from other sources. These other sources can be grouped into Informal, semi-formal and formal finances (Awlachew & Motumma, 2017 and Osei-Assibey, et al. 2012).

According to Petit and Singer (1985) with firms of all nature, the choice of one financing source over the order is dependent on the cost, nature and availability of these financing options. Daskalakis, Jarvis and Schizas (2013) on the other hand,

attribute these financing decisions to entrepreneur's preference. The firm level and owner's characteristics however, influence these financing options behavior of firms (Kye-Boadu, 2017). The other factors include the level of government supports and the management system in place. To ensure the growth of micro, small and medium enterprises so as to realize their full impacts, the financing decisions of these firms and the factors that influence these choices must be scientifically understood.

Following this, several studies have been carried out to understand the financing preferences of MSMEs around the world. These studies have either used firm's level characteristics alone or together with entrepreneur's characteristics to examine the subject. These studies have also used various methods such as the Generalized Method of Moments, Ordinary Least Squares, Logistics Regressions, Binary Regression or the Ordinal Logistics Regression techniques and have come out with various conclusions. For instance, the study by Osei-Assibey, et al. (2012) has concluded that SMEs prefer internal finance (ploughing back profit) to external finance (informal, semi-formal and formal finances) out of constrained. Kurupu and Azeez (2016) also concluded that SMEs prefer internal finance to external and debt (that is long term debt and short term debt respectively) to equity. Baker, et al. (2017) also concluded that MSMEs prefer internal finance to external and when the need for external finance arises, firms prefer to use more informal finance than formal finance. The study further maintains that though MSMEs prefer formal finance, they do not always use it. Finally, Kyei-Boadu (2017) also concluded that SMEs prefer debt finance to equity finance.

Based on these, it is worth noting that as far as research on micro, small and medium enterprises' financing behavior is concerned, there is some information about these firms' financing behavior and the factors that influence these behaviors. However, as

far as research on this subject is concerned, little or not much work has been done to explore the influence of government supports and firms' management trainings on the financing behavior of micro, small and medium enterprises. Considering the impacts of these factors on MSMEs' growth, there is therefore, still the need to further examine the financing behavior of these enterprises and the possible factors that explain this behavior.

It is against this backdrop that this study was set out to use firm and owner characteristics together with government supports management training under the framework of logistics and ordered logistics regressions to shed more light on the financing behavior of micro, small and medium enterprises in the Bolgatanga Municipality of Upper East Region of Ghana.

1.3 Objectives of the Study

The main objective of the study is to establish the financing preferences of micro, small, and medium enterprises in the Bolgatanga Municipality. However, to achieve this objective, the study has the following specific objectives:

1. To examine the financing preferences of micro, small and medium enterprises in the Bolgatanga Municipality.
2. To analyze the factors that influence the financing preferences of micro, small and medium enterprises in the Bolgatanga Municipality.

1.4 Research Questions

An analysis of the above stated objectives indicates that the following research questions were appropriate to form the focus of the study.

1. What are the financing preferences of micro, small and medium enterprises in the Bolgatanga Municipality?
2. What are the factors that influence the financing preferences of micro, small and medium enterprises in the Bolgatanga Municipality?

1.5 Significance of the Study

Micro, small and medium enterprises have been important to the Ghanaian economy for their contributions to GDP, employment creations, foreign exchange earnings and the training of young entrepreneurs among others. Unfortunately, their growth and development have over the years been challenged largely by inadequate credit facilities and others such as low managerial skills of managers, poor provision of social amenities like electricity and road networks among others. Research works into financing preference behavior of MSMEs aimed at providing solutions to their financing problems have been conducted in some parts of the world. However, little is known about the financing preference of micro, small and medium enterprises in Ghana. Therefore, the study into the financing preferences of MSMEs in the Bolgatanga Municipality using government supports (technical and financial) together with owner and firm's level characteristics will also add to the current body of knowledge on the financing behavior of MSMEs.

Once the preferred financing option of these enterprises is scientifically discovered, it will guide policy makers and NGOs to implement policies that will promote their growth for the benefit of Ghanaians.

Finally, the findings of this study will serve as a basis for further research works on the subject.

1.6 Organization of the Study

The study was organized in five main chapters. Chapter one of the study began with the background of the study, statement of the problem, research objectives and questions, significance of the study and organization of the study.

Chapter two on the other hand, was devoted to literature review which was further divided into three sub-sections. The first section contained the theoretical review while the second and third sections were devoted to the empirical review and chapter summary respectively.

Chapter three also dealt with the research methodology and procedures used for data collection while chapter four focused on results and data presentation and discussions.

Chapter five contained a summary of the study, findings, conclusions and recommendations for action as well as the limitations of the study.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.0 Introduction

This chapter presents review of theoretical and empirical literature on firms' financing preference behaviors. This is presented in three sections. The first section is on theoretical review. The second section is devoted to the empirical literature on firms' financing preference behavior and the final section presents the conclusion of this chapter.

2.1 Review of Theoretical Literature

Following the literature on MSMEs' financing preferences, the pecking order theory (Myers & Majluf, 1984) is the most suitable in explaining MSMEs financing preferences. Hence, the pecking order theory forms the theoretical basis of the study.

The pecking order theory is traced to the Irrelevance theory of Modigliani-Miller. Hence, the Modigliani-Miller (1958) Irrelevance Theory of the firm was reviewed. The "Irrelevance" theory of the firm is the foundation of firms' financing behavior theories. It is built on the following propositions.

Proposition I: which was proposed by Modigliani and Miller in 1958, states that the value or weighted average cost of capital (WACC) of a firm does not depend on the proportion of debt-equity the firm employs rather, the firm's value depends on its income stream and the level of risk of the business. Therefore, the value of a firm with debt financing (geared company) would be the same as the one with ordinary shareholdings (ungeared company). Any variations in the values of these firms would be quickly balanced by market forces. This will be the result of arbitrage. The theory explains that if the firm with debts is overvalued and the market in the meantime, is

offering shareholders of the company with ordinary shares, investors will sell their shares in the overvalued company and simultaneously acquire shares in the undervalued firm to make higher profits without incurring any risk. This process will increase the value of the geared company (that is company with high debt) and decrease the value of the ungeared company (company with ordinary shares) until the values of the two company balance out (Modigliani & Miller, 1958).

Proposition II: The second preposition states that given Preposition I, the cost of equity capital is a positive function of the debt-equity ratio. Any benefits arising from the use of debt would be offset by the higher cost of equity capital, indicating that the weighted average of these costs of capital are the same irrespective of the capital structure of the firm (Modigliani & Miller, 1958).

The Proposition III: States that a firm should invest in a project whose net present value (NPV) is positive. This is because such a decision would be independent of the capital structure or the security with which it is financed.

The Irrelevance theory has been criticized by Myers and Majluf (1984), Ross (1977), DeAngelo and Masuli (1980), Jensen and Meckling (1976) and Warner (1977) for its unrealistic assumptions. In reality, capital markets have imperfections. They are signaling and information gaps between managers and investors in capital markets (Ross, 1977, Myers & Majluf, 1984). To Warner (1977), businesses pay corporate taxes and therefore, face bankruptcy risk. To DeAngelo and Masuli, 1980), tax shields are not only associated with debt but are also driven from non-tax instruments. Besides, in reality, costs of transportation can never be free. Firms incur transportation cost. Following these criticisms, Modigliani- Miller, came with another proposition in 1965 which revised **Proposition I** to include corporate taxes. This

shields firms' earnings from taxation. With these benefits, they posited that the firm can continue to borrow more in order to enjoy the benefits associated with tax shield which helps firms to reduce the amount paid as tax.

One of the advantages of the Irrelevance theory is that it has formed the basis for capital structure theories. All capital structure theories of firms traced their roots to the Irrelevance theory of Modigliani and Miller. The irrelevance of dividends is also important in helping investors to cut down costs arising from the floating of shares. Instead, it places an obligation on managers to adopt investment decisions and strategies that would increase their cash inflows which the theory deems is an important determinant of the firm's value. Also, the theory is important as it helps investors to avoid diluting their interest in their businesses. The issuance of new equities brings in new investors which dilute the interest and control of existing shareholders. By advocating for a high retention policy, the theory does not only help investors to protect their interest but helps them to maintain their ownership and control of their businesses.

2.1.1 The Trade-Off Theory

The criticisms leveled against the irrelevance theory led to the development of the trade-off theory by Kraus and Litzenberger (1973) which states that firms trade off the benefits and cost of debt and equity financing and find an optimal capital structure after accounting for market imperfections such as taxes, bankruptcy costs and agency costs.

The Irrelevance theory can be used to describe how firms use taxation to manipulate profitability and to choose an optimum debt level. According to the theory, the use of debt protects firms' earnings from corporate taxes and therefore, recommends that

firms borrow more to shield their earnings from taxation. Similarly, firms should cut down on borrowings to avoid paying more corporate taxes if tax rate is reduced. However, borrowing increases the risk of bankruptcy because as the debt to equity ratio increases, the debt holders will require higher interest rates but also the shareholders will demand higher profits for their investments.

Managers often think of the firm's debt–equity decision as a trade- off between interest tax shields and the costs of financial distress. Companies with safe, tangible assets and plenty of taxable income to shield ought to have high debt. While unprofitable companies with risky, intangible assets ought to rely primarily on equity financing. If there were no cost of adjusting capital structure, then, each firm should always be at its target debt ratio (Brealey & Myers, 2003).

Companies' capital structures where debt tax shields are maximized and bankruptcy costs associated with the debt are minimized. Debt offers firms a tax shield because the interest on debt is deducted before paying taxes. The cost of capital allowance in any year is deducted from the balance of the initial cost of investment (undepreciated capital cost). This makes the value of the investment reduces every year for tax purposes. The capital cost allowance rate for subsequent years is the product of the capital cost allowance rate and the new undepreciated capital cost balance. The capital cost allowance on the other hand, is the product of the marginal tax rate and the current cost of investment. So this makes firms which borrow more pay less corporate taxes. This thus makes firms increase the level of debt in order to gain the maximum tax benefit at the risk of a possible bankruptcy. The trade-off theory helps managers to reduce the cost of capital by striking an appropriate balance in its debt- equity mix. Also, the theory incorporates the benefits of taxes and the cost of floatation in its

assumptions. The theory however, does not consider the need for managers to maintain control and ownership of their businesses. Finally, the theory downplays the advantages associated with financial slacks which enable firms to remain resilient during challenging times or downturns. The trade-off theory is further divided into two, the static and dynamic trade-off theories.

The Static Trade-off theory states that firms set a target debt-equity ratio and gradually move toward achieving optimum debt-equity mix where the benefits of borrowing are maximized and the cost of equity minimized. The theory affirms that optimal capital structure is determined by trading off the cost and benefits of the use of debt and equity. Debt though brings about tax shield; the cost of it is financial distress. This leads to a trade-off between tax benefit and risk of financial distress. Another limitation is agency cost. Agency cost is the internal cost born out of conflict of interest between the principal (outside investors) and agent (manager) of a company. The managers have more information about the true value of the firm than the shareholders. The agency cost theory assumes that both the principal and agent seek to maximize their own interest. Since the agent has more information than the principal, the agent is likely to undertake decision that maximizes his welfare than the principal. For the principal to check this, the principal can either pay to motivate or bond the agent into taking decisions that would maximize the welfare of the principal. Agency cost is thus referred to the practice where the principal provides the agent with good working conditions that incentivizes the agent to take decisions that maximize the overall welfare of the principal (Jensen & Meckling, 1976).

The conflict of interest between agent (manager) and the principal (shareholders) increases when the former uses the firm's excess funds to finance or invest in

unproductive projects instead of projects with positive net present value. This makes profitable firms incur high cost as a result of such wrongful investments. To reduce such costs, profitable firms should borrow more to reduce the availability of excess funds to managers. Hence, agency costs make tax advantage of debt less useful because of financial distress. In conclusion, the Static Trade-off theory assumed that the companies balance the tax benefits of debt with risks of bankruptcy.

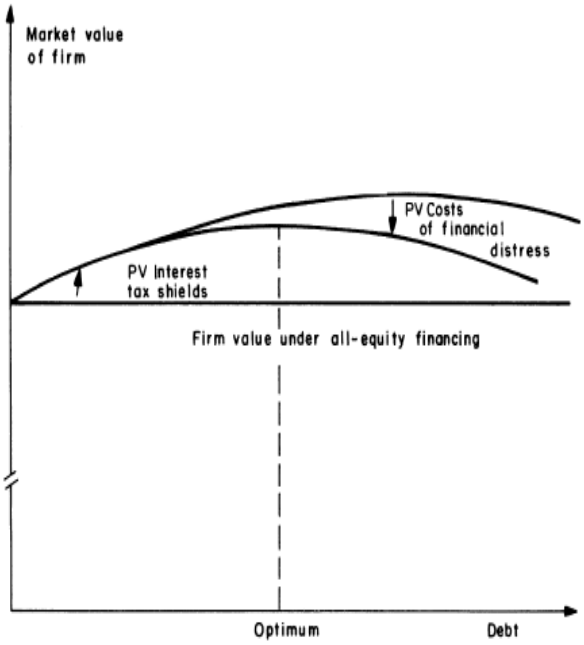

Figure 1: Static Trade-Off Theory

Source: Laisi, T. (2016)

In the diagram above, the firm aims at borrowing up to the optimum point where the full benefits of tax shield are driven and the cost of equity are minimized but beyond the optimum point, the firm incurs high cost of financial distress (Shyam-Sunder and Myers, 1999).

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Dynamic Trade- off theory states that firms let their leverage ratios vary within an optimal range (Dudley, 2007). To Dudley (2007), profitable firms find it beneficial to readjust their debt-equity ratio more often in order to capture the tax benefits of debt as predicted by the Dynamic Trade-off theory.

Hovakimian et al. (2001) found that more profitable firms are likely to issue debt over equity because not only profitable firms are insulated against bankruptcy risk but they have more income that they can leverage on to derive the benefits of tax shield.

2.1.2 The Pecking Order Theory

Another important theory of firms' financing behavior is the Pecking Order Theory which states that information asymmetry between managers of a firm and potential investors with respect to the true value of the firm will make managers to choose internal financing ahead of external financing.

The pecking order theory is based on the following set of assumptions:

- Managers of a firm are assumed to be more knowledgeable regarding the true value of the firm than potential investors.
- Investors interpret the firm's actions rationally.
- Managers act in the interest of existing stockholders
- Stockholders are passive and do not adjust their portfolios in response to the firm's issue-invest decision, except possibly to buy a predetermined new issue.

The information gap in these assumptions is the mis-pricing of the firm's equity in the market which affects the value of existing shareholders' interest in the firm (Myers & Majluf, 1984). Thus, if the firm finances its new project through the issuance of new securities, these securities will be underpriced. Due to the high costs associated with

information and managers' inability to credibly convey their special knowledge on the assets and investible opportunities to all potential investors (outsiders) may be unable to discriminate between good and bad projects. Investors may interpret the firm's decision to issue new securities as a sign of bad times and consequently will underprice the offer. They will only be motivated to purchase the securities if risk premium is offered them or if the issuers will sell the equity to them at a discount.

Managers mindful of this possible reduction in existing shareholders' interest, and the need to protect shareholders' interest, may refuse to issue stock and therefore, may ignore good investment opportunities. In view of this, Myers and Majluf (1984) posited that firms' managers would resort to debt financing instead of equity financing when internal financing becomes insufficient or depleted.

The pecking order theory aids entrepreneurs to identify financing strategies that help to reduce cost and optimize profits. Also, by recommending the need for internal financing, it helps managers to enjoy financial slacks in times of downturn. Excess funds help the firm to stand during bad times. Besides, the theory shows that business owners are much concerned about maintaining their ownership and control of the business. The use of internal financing helps owners to maintain control of their businesses since the use of these resources would not require public disclosure of audited financial statements or accounts. By placing emphasis on internal financing, the theory also helps managers to reduce the cost of equity and agency. Once firms use internal finances, they will not incur equity floatation cost. Finally, the theory is helpful in explaining the changes associated with financing behavior of firms. That is, when firms apply debt instead of internal finance in its operation, it is so because, the

latter is unavailable and when equity is used, then, the cost of debt becomes unbearable to the firm.

However, the assumption of the theory implies that they are specific categories of sources of finance that firms use for their operations. This is an over simplification of reality. In reality, there are other sources of finance open to investors contrary to the proposition of the theory. Also, the theory fails to consider the effects of taxes and floatation costs on firms' investment decisions. Finally, the theory ignores the negative effects of excess accumulated earnings on the managers' ability to undertake new investment opportunities to increase the value of the firms. Excess earnings does not encourage managers to innovate to come out with new investment opportunities. The opportunity cost of holding this excess money has equally not been considered by the theory in its proposition.

The high information asymmetry associated with micro, small and medium enterprises shows that the financing behavior of these enterprises will be in sync with the predictions of the pecking order theory.

2.2 Review of Empirical Literature

Following Myers and Majluf (1984) proposition on firms' financing behavior, a lot of studies on the theory have been carried out in various parts of the world. The findings of these studies have, however, been mixed depending on the country, method and sample size used.

The findings from the following studies show that firms financing behavior follow the pecking order theory; Riportella and Papis (2006), Jong, et al. (2010), Mbugua (2010), Vanacker and Manigart (2010).Dionysios and Lazaros (2011), Hendrawan

(2012) Osei-Assibey, et al. (2012), Kira (2013), Schmidt and Schmidt (2013), Aabi (2014), Sakr Ayed and Zouari (2014), Narmandakh (2014), Nawi (2015), Qureshi, et al. (2015), Bhama, et al. (2016), Iasonidous (2016), Kuruppu and Azeez (2016), Kyei-Boadu (2017), Jarallah, et al. (2018) and Bedeir (2019). For instance, using data from U.S. firms, Ghosh (2004), used Fisher Exact Probability test and Goodman-Kruskal Gamma measures to carry out a further of optimal capital structure and the pecking order theory. The results from the study largely show support for the pecking order theory.

Similarly, Tong and Green (2004) under the framework of Ordinary Least Squares regression adopted three different models to test the pecking order and trade-off theories of listed Chinese companies. The regression results from the different models employed, favored the pecking order theory.

Again, using a cross sectional data, Riportella and Papis (2006) made an analysis of the capital structure of SMEs in Spain to find out how theory meets practice. The study employed the mixed method involving the ANOVA estimation technique. The results of the estimation show that the pecking order theory explains the capital structure of Spanish firms more than the agency cost and signaling theories.

In addition to the above, using firm's characteristics, Daskalakis et al., (2014), adopted panel data to examine the capital structure decision in relation to firms' size using European MSMEs. The findings of the study show that the financing behavior of firms is consistent with the pecking order theory.

Using panel data from US firms, Jong, et al (2010) investigated the impact of financing surpluses and large financing deficits on the pecking order theory under the framework of Shyam-Sunder and Myers (1999) methodology of testing the pecking

order theory. The results of the study reveal that the financing behavior of US firms follow the pecking order theory.

Similarly, Mbugua (2010) used time series data to investigate into the application of pecking order concept of firms in Nairobi stock exchange. Using multiple regression models, the results from the study show that Nairobi firms' financing behavior is consistent with the pecking order theory.

Also, Vanacker and Manigart (2010) used multivariate logistic regressions to look at the pecking order and debt capacity considerations for high-growth companies seeking financing in Belgium. The regression results show that the financing behavior of companies with lower debt ratios and higher cash flow is consistent with the pecking order theory.

Moreover, Al Manaseer, et al (2011) used firms from U.K to test the pecking order and the target models of capital structure. Using the Shyam-Sunder and Myers (1999) as well as Frank and Goyal (2003) models to investigate the pecking order theory and the partial adjustment model to investigate the existence of the target capital structure theory of firms, the results from the study reveal that the financing behavior of firms is consistent with the pecking order theory and not the target capital structure theory.

Wang et al. (2011) used information transparency and corporate financing decision to test the pecking order theory with evidence from Taiwan firms. Using a modified version of Shyam-Sunder and Myers (1999) model, the study found that the capital structure of firms with lower transparency was consistent with the pecking order theory. In addition, firm's ~~size, tangibility of assets were~~size, tangibility of assets was also positive and found to influence firms' financing behavior.

Moreover, Degryse, et al. (2012) adopted the panel data analysis and studied the impact of firm and industry characteristics on small firms' capital structure using Dutch SMEs. It was revealed that the financing decisions of larger, profitable firms and firms with higher growth opportunities are consistent with the pecking order theory. The regression results of the industry effects also reveal that the pecking order theory is most relevant for all the industries studied. Generally, the results of the study show proof for the pecking order theory.

Furthermore, Hendrawan (2012) used SMEs in Batam Free Trade Zone to investigate small and medium-sized enterprise's characteristics that enhance the ability of firms to acquire debt in Indonesia. Adopting logistics regression model, the results of the study provide enough evidence for the pecking order theory.

Again, Jibran, et al. (2012), used non-financial firms listed at Karachi Stock Exchange to test the pecking order theory of listed firms in Pakistan. Using panel data regression method, the results from the study provide some support for the pecking order theory.

Also, the study by Osei-Assibey et al (2012) used owner and firm's characteristics to investigate the determinants of financing preference of micro and small enterprises (MSEs) in Ghana under the framework of ordinal logistics regression method and found that the financing preference of firms follow the pecking order theory.

In the same vain, Benkraiem and Gurau (2013), used OLS fixed-effects regressions to investigate how corporate characteristics affect capital structure decisions of French SME and generally found that the financing behavior of French firms is consistent with the pecking order theory.

In addition, Chuan- Hao et al (2013), used American listed firms to test the pecking order behaviors from the viewpoint of multinational and domestic corporations. Employing the Shyam-Sunder and Myers' (1999) pecking order methodology, the results from the study indicate that the financing behavior of the multinational corporations is more consistent with the pecking order theory than the domestic firms.

Also, Forte, et al. (2013) used the Generalized Method Moments estimator to investigate the determinants of the capital structure of small and medium sized Brazilian enterprises. The results of the study show that profitability, size, asset growth, age and volatility of earnings determine the capital structure of Brazilian small and medium firms. The findings also confirmed the pecking order theory.

Besides, Kira (2013) also used owner and firm's characteristics to evaluate the factors that influence small and medium firms' access to debt financing in Tanzania. Employing multiple regression models, the results confirm the existence of the pecking order theory.

Furthermore, Rodel (2013), also used firm's characteristics under the framework of Ordinary Least Squares regression method to examine the capital structure with evidence from Dutch non-financial firms listed on the stock exchange Euronext Amsterdam. The results show that the financing behavior of Dutch firms is consistent with the pecking order theory.

Again, Schmidt and Schmidt (2013) used data from Swedish real estate firms to investigate the capital structure of firms. Adopting the Frank and Goyal (2003) and Shyam-Sunder and Myers (1999) estimation techniques, the results show that firms financing behavior is more consistent with the pecking order theory than the trade-off theory. The results however, did not show much support for the agency cost theory.

Similarly, Aabi (2014) used panel data analysis to obtain an insight into the pecking order theory and SMEs financing in the Moroccan context. The dynamic approach was adopted to test for evidence of pecking order. The results of the dynamic estimation confirm the existence of the pecking order behavior among Moroccan firms.

Furthermore, Ayed and Zouari (2014) used panel data from Tunis firms to test the capital structure and financing of small and medium enterprises. Employing the generalized method of moments, the results from the study confirm that the financing behavior of Tunisia small and medium enterprises follow a hierarchical order.

In the same vain, Shah and Llyas (2014) also adopted several pecking order models from Shyam-Sunder and Mayer (1999), Frank and Goyal (2003), Watson and Wilson (2002) and Rajan and Zingales (1995) to examine whether negative profitability-leverage relation is the only support for the pecking order theory in the case of Pakistanis firms. Under the framework of pooled OLS regression, the results from both the SSM and Frank-Goyal models provided evidence in support of the pecking order theory. However, the results of the Watson and Wilson model interestingly show that Pakistanis firms rather prefer external to internal financing which is in sharp contrast to the prediction of the POT. The results largely show significant support for the pecking order theory.

Adopting panel data analysis, Acaravci (2015) investigated into the determinants of capital structure of manufacturing companies listed in the Turkey Stock Exchange market. The results of the study largely provide that the financing behavior of Turkish firms is more consistent with the pecking order theory than the trade-off theory.

Nawi (2015) used owner and firm's characteristics to examine the determinants of capital structure of SMEs in Malaysia. Using logistic regression model, it was found that SMEs' financing decisions in Malaysia follow the pecking order theory.

Similarly, Qureshi et al., (2015) used non-financial firms listed in the Karachi Stock Exchange to determine which one, Pecking order theory or trade-off theory explains better, the financing behavior of firms. Using panel data method, it was revealed that POT explains financing behavior of firms better than the TOT. Results also showed that some sectors are good for the POT and others the TOT. Overall, the results of the study largely support the predictions of the pecking order theory.

Again, Yulianto et al., (2015) also adopted the POT model testing by Shyam- Sunder and Myers (1999) and the modified version of this model by Frank and Goyal (2003) to test the pecking order theory and the trade-off theory by companies in Indonesia. The results of the POT model testing show that the financing decisions of companies in Indonesia follow the pecking order theory.

Also, Iasonidous (2016) used data from Sweden publicly traded companies to investigate the determinants-off capital structure of firms and also to test the pecking order theory against the trade of theory. Employing multiple regression analysis, the study found that the financing behavior of Swedish firms is largely consistent with the pecking order theory than the trade-off theory.

Using data from Sri Lanka firms, Kuruppu and Azeez (2016), used ordinal regression model and the testing pecking order theory methodology of Vasilious, Eriotis and Daskalakis (2009) to examine whether the pecking order theory of small and medium enterprises holds. The results of the estimations show that pecking order theory works among Sri Lanka's firms.

Using listed firms from North European economies, Laisi (2016) tested the pecking order theory in a bank-centered lending environment under the pecking order testing methodologies by Shyam-Sunder and Myers (1999) and Frank and Goyal (2003). The results of the study show that the financing behavior of listed firms in north European economies is more consistent with the pecking order theory.

Employing owner and firm's characteristic of Ethiopian firms, Awlachew and Motumma (2017) investigated the determinants of financing preferences of micro, small and medium enterprises owners. Employing the linear probability regression method, the results provide some support for the POT.

Using cross-sectional data from Ghanaian small and medium enterprises to investigate SMEs external financing preference and its impact on growth, Kyei-Boadu (2017) used a binary logistic regression to examine the impact of owner and firm's characteristics on external financing. The findings of the study provide some evidence in support of the pecking order theory.

Wanja (2017), also used firms listed in Nairobi Securities Exchange for the period between 2011- 2016 to test the pecking order theory of capital structure of firms in Kenya. Employing the panel regression method, the study found a significant support for the pecking order theory.

In a similar vein, Bhama (2018) used firms from the Bombay Stock Exchange and the Shanghai Stock Exchange respectively to examine the adherence of the pecking order theory in deficit and surplus situations by comparing firms in India and China. Under the framework of Ordinary Least Square Regression, it was discovered that firms in both countries follow the pecking order by issuing large amounts of debts.

Also, Jarallah, et al., (2018) examined the pecking order and trade-off theories of capital structure with Japanese firms. Employing the Generalized Methods of Moment and the Instrumental Variable Econometric Techniques, the results from the study show that the financing behavior of firms in Japan follows the pecking order theory.

Finally, using non-financial listed companies in the Egyptian stock exchange market, Sakr and Bedeir (2019) examined firm's level determinants of capital structure of firms. Employing the Ordinary Least Squares Estimation Technique, the results show that financing choices of Egyptian firms is in line with both the pecking order theory and the trade-off theory.

In conclusion, the findings of the literature reviewed provide evidence that the financing behavior of micro, small and medium enterprises is consistent with the pecking order theory.

However, the following studies among others have also come out with either little, or inclusive results on POT. They include; Ni and Yu (2008), Bundala (2012), Fourati andAffes (2013), Widjaja (2013), Basti and Bayyurt (2019), Kalui (2017), Harrison and Santarelli and Tran (2018), Theeuwen (2018), and Bukalska (2019) Yousef (2019). For instance, the studies by Byoun (2002) used Indian firms to carry out an empirical analysis of dynamic capital structure with focus on the pecking order and trade-off theories. Using the Ordinary Least Squares Estimation Techniques, the study found that the financing behavior of Indian firms follow both the pecking order and trade-off theories of dynamic capital structure. Based on this, the study concludes that both theories are complementary and not competitive.

Adopting the Shyam-Sunder and Myers (1999) testing the pecking order methodology, Frank and Goyal (2002) used data from publicly traded firms in

America to test the pecking order theory of capital structure. The results from the study show that more external financing than internal finance as opposed to by the pecking order theory. The results further show that the financing decisions of large firms show a little support for the theory when small samples were used for the estimation.

In the same vein, Sogorb-Mira et al., (2003), used data from Spanish small and medium enterprises (SMEs) under panel data methodology to explore two of the most relevant theories (Pecking order theory versus trade-off theory) that explain financial policy in small and medium enterprises. Using generalized moment methods, the results show that both theoretical approaches contribute to explaining capital structure in SMEs in Spain. However, while evidence was found in favor of the trade-off theory, there was less evidence in support of the pecking order model.

Also, Ni and Yu (2008), testing the pecking order theory with evidence from Chinese listed companies under the framework of the Ordinary Least Squares (OLS) estimation technique, found no evidence that Chinese small companies financing behavior follow the Pecking Order Theory. The study also found no evidence to show that the financing decisions of Chinese firms with moderate debt ratio follow the pecking order behavior. It however, found that the financing behavior of the large companies was consistent with the pecking order theory. Thus, the study concludes that Chines large but not small companies financing behavior is consistent with the pecking order theory.

In a similar vein, Adesola (2009) used data from Nigerian listed firms to test the static trade-off theory against the pecking order model of capital structure. Employing Ordinary Least Squares multiple regression methods, the results from the estimations

show that the financing behavior of Nigerian listed firms can be explained by both the static trade-off theory and pecking order theory. Based on this, the study concludes that the pecking order theory alone does not explain the capital structure of firms.

Leary and Roberts (2010) used data from the Compustat database to investigate the pecking order, debt capacity and information asymmetry of North American firms. Using a novel empirical model for the estimations, the results from the study show that the financing decisions of firms do not support the pecking order theory. The study however, found the presence of pecking order when the model was extended to include other factors influencing the capital structure of firms. Based on these, the study concludes that the pecking order theory of firms depends on the incentive conflict and not information asymmetry.

In addition, Dionysios and Lazaros (2011) used data from American publicly traded companies to investigate the capital structure-pecking order theory in the shipping industry. Adopting, a pooled cross sectional analysis technique, the results show that firms in America shipping industry capital structure follow a modified pecking order theory. Evidence of the theory was however, not found after the financial crisis of 2008.

Moreover, Matemilola and Bany-Ariffin (2011) used listed firms at the Johannesburg stock exchange to investigate the pecking order theory of capital structure. Under the framework of the generalized method of moments, the results from the study show that the financing behavior of South African firms is consistent with the pecking order theory. The results further reveal that South African firms have target debt ratios but make moderate adjustments to their long-run target debt ratio. Based on these

findings, the study concludes that the financing behavior of South African firms is consistent with both the pecking order and trade-off theories.

Furthermore, Bundala (2012), used firm's characteristics to investigate whether Tanzanian non-financial companies listed in Dar Es Salaam Stock Exchange (DSE) practice the pecking order theory, agency cost theory or the trade-off theory. Employing multiple regressions models, it was discovered that there was a weak support for both the pecking order and trade-off theories but a strong support for the agency cost theory. Based on this, the study concludes that the financing behavior of Tanzanian firms follows the agency cost theory.

The studies by Fourati and Affes (2013) which used owner and firm's level characteristics of American firms to answer the question as to whether there is a pecking order theory or reversed pecking order in the capital structure of business start-up adopted the logistics regression technique for the estimation. The results of the descriptive analysis of the study show that the capital structure of American firms follow the pecking order theory. The results from logistics regression however, show a reverse pecking order where firms rather prefer equity to debt when the need for external finance arises. Based on this, the study concluded that the financing behavior of American firms follow both the pecking order and a reversed pecking order.

In addition, Harrison and Wadjaja (2013) used panel data from firms in Compustat, North America to find out whether the financial crisis in 2008 impacted on the capital structure of firms. Adopting a random effect model, the study found only evidence to support the existence of the pecking order theory during the financial crisis. The study again, reveal that the existence of the trade-off theory after the period. The finding is thus, inconclusive for the pecking order theory.

Malinic et al. (2013) used Serbian firms listed on the Belgrade Stock Exchange to investigate the determinants of capital structure in emerging capital markets. Employing panel data fixed effect model approach, the results show that the financing behavior of Serbian firms follow a modified pecking order theory.

Similarly, examining the determinants of capital structure of firms from a major developing economy, Koksal and Orman (2014) used firm and industry specific data to make a comparative test between the trade-off and pecking order theories of capital structure of Turkish firms. The results from the study show much support for the trade-off theory for all firms than the pecking order theory. The results further show that the financing behavior of large private non-manufacturing firms is more consistent with the trade-off theory. The results however, show that the financing ~~decisions of the small publicly-traded manufacturing firms also supports~~decision of the small publicly-traded manufacturing firms also supports the pecking order theory. Based on these findings, the study concludes that none of the two theories sufficiently predict the financing behavior of all firms.

Moreover, Narmandakh (2014) used panel data to investigate the determinants of capital structure of Mongolian listed firms with particular focus on the pecking order theory. Under the framework of the Ordinary Least Squares Estimation Technique, the study found that Mongolian firms financing behavior follow a modified pecking order theory.

Employing panel data, Adair and Adaskou (2015) used firm's level characteristics to examine the trade-off theory and the pecking order theory and the determinants of corporate leverage with French small medium enterprises. Adopting Quasi-

Generalized Least Squares estimation techniques, the study found no sufficient evidence in support of both the pecking order and trade-off theories.

In a similar vein, Menike (2015) used cross sectional data from Sri Lankan firms to investigate the capital structure and financing of small and medium enterprises. The study adopted simple and multiple logistics regression techniques for the estimations. The results show that the financing decisions of SMEs in Sri Lanka follow both the pecking order theory and the life cycle theory.

In addition, Bhama et al. (2016), used time series data from Indian firms to test the pecking order behavior of firms under situation of deficiency as well as surplus. Using the Ordinary Least Squares regression method, the study found that firms appear to issue debt frequently when they have deficits but, in general, they keep their debt ratios in limit. The results thus revealed that deficit firms follow a "modified pecking order" where both the pecking order and trade-off theory are fitted in. It was further found that the pecking order theory works extremely well for firms with small deficits and quite well for firms having large deficits.

Furthermore, using panel data, Kalui (2017), used firm's characteristics to test the applicability of the pecking order theory with Kenyan listed firms. Employing ~~a multivariate regressions~~multivariate regressions, the study found a little support for the pecking order theory.

M'ng et al (2017) used data from publicly traded companies in Malaysia, Singapore and Thailand to investigate the determinants of capital structure of firms. Using panel data regressions, the study finds that the financing behavior of Malaysia, Singapore and Thailand is consistent with both the pecking order theory and the trade-off theory.

Using panel data from America firms, Reniers (2017) employed simple Ordinary Least Squares, fixed effects and random effects estimation techniques to test the pecking order theory on technology firms. The results from the estimations reveal less support for the pecking order theory. Evidence of the existence of the theory was however, found with the financing decisions of medium and large scale firms when the sample was split base on the size of firms.

Also, using panel data from Shari'ah listed companies, Yildirim, et al. (2017) used Ordinary Least Squares, Fixed Effects and Random Effects estimation techniques to examine the determinants of capital structure of both compliant and non-compliant firms. The estimation results show that the financing behavior of both firms follow the pecking order and trade-off theories of capital structure. Based on this, the study concludes that the pecking order theory alone does not explain the capital structure of Shari'ah firms.

Again, using data from Vietnamese firms, Santarelli and Tran (2018), examined the interaction of institutional quality and human capital shaping the dynamics of capital structure under the framework of system generalized method of moments. The findings show that the capital structure of Vietnamese firms is consistent with both the trade-off theory and the pecking order theory. The study concludes that the pecking order theory alone does not explain the financing behavior of firms.

Again, Theeuwen (2018), used data from listed companies in Germany, France and UK, a cross industry study on the effects of the financial crisis on firms' capital structure. Using panel data analysis, the study found the pecking order theory is the dominant capital structure theory that explains the financing decision of firms in the three countries. The results further show that the capital structure of firms in the three

countries change and was more consistent with the trade of theory during last periods of the financial crisis. In conclusion, the findings of the study were inconclusive.

Again, Basti and Bayyurt (2019), used firm's characteristics to investigate the factors affecting capital structure choices of firms non-financial companies listed in Turkish stock exchange. Employing panel regressions models, the findings from the study show support for both the pecking order and the trade-off theories.

Finally, Yousef (2019) used panel data to investigate the determinants of capital structure of real estate firms from Gulf Cooperation Council (GCC) and UK. The study employed the panel data analyses and Tobit regression techniques for the estimations. The results from the estimations show that the capital structure of firms can be explained by both the trade-off and pecking order theories of capital structure.

In conclusion, the findings of the literature reviewed provide either little support or inconclusive results to support the pecking order theory of capital structure of firms.

Contrary to the studies that have conclusively or inconclusively affirmed the POT, there are also several empirical studies on POT that have come out with findings that do not support the proposition of the theory. These include: Zhao, et al. (2004), Ekeroth and Wahlberg (2006), Bessler, et al. (2010), Densil (2010), Bauweraerts and Colot (2012), Culata and Gunarsih (2012) among others.

For instance, Zhao et al (2004) used data from Illinois farm business, farm management system, to test the pecking order and signaling theories of capital structure for farm businesses using dynamic simultaneous equations. The results show

that Illinois firms' capital structure is consistent with the signaling theory and not with the pecking order theory.

Also, Ekeroth and Wahlberg (2006), used firms from Sweden to test for optimal capital structure theory and pecking order theory using a binomial approach. From the analysis, the results from the study show that Swedish firms first prefer internal finance and when this source is not available they go in for equity before debt in sharp contrast to the pecking order theory. The study thus concludes that the financing behavior of Swedish firms is not consistent with both the optimal capital structure theory and the pecking order theory.

Furthermore, Bessler, et al. (2010) used different models to test the pecking order theory from an international sample of firms. The results from the different models show that financing decisions of U.S firms show no support for the pecking order theory. The results, relative to civil laws countries, further show little support for the theory. Finally, the results reveal that the relationship between the financing deficit and changes in debt is largely shown by firms with negative deficit. In the whole, the findings contradict the position of the pecking order theory.

For instance, Densil (2010) used 250 family-owned businesses sampled through the snowballing techniques from all the industrial sectors in Jamaican's economy for an empirical study into the financing of small, family-owned businesses in Jamaica. The study applied the Financial Growth Cycle Model as proposed by Berger and Udell (1998), which shows how the financing needs and options of the firm changes as the business grows, becomes more experienced and more transparent to analyze the impact of certain characteristics of the firm that influence its decision to raise funds for its growth and survival. Using multivariate estimation techniques, the study found

that neither the pecking order theory nor the financial growth cycle model adequately explains financing of family-owned businesses in Jamaica.

Again, Bauweraerts and Colot (2012) used panel data to investigate whether the pecking order or static trade-off theories of capital structure apply to Belgium family owned firms. Adopting the Shyam-Sunder and Myers (1999) testing order and trade-off methodology, the results from the study show no evidence in support of either theory. The study however, found that the financing behavior of family owned businesses is more likely to conform to an indebtedness target ratio.

Similarly, Culata and Gunarsih (2012) used firms from the Indonesian stock exchange market to investigate the pecking order theory and the trade-off theory of capital structure. The study employed the estimation techniques by Shyam-Sunder and Myers (1999) as well as Cotei and Farhat (2008) to test the pecking order theory and the method of partial adjustment by Fama and French (2002) and Flannery and Rangan (2006) for the trade-off theory. The results show that the financing decisions of Indonesian firms are consistent with the trade-off theory and not the pecking order theory.

Using data from Czech's automotive industry, Pinkova (2012) adopted Heyman, Deloof and Ooghe (2008) methodology together with multiple regression estimation techniques to investigate the determinants of capital structure. The estimation results show that both the pecking order theory and the static trade-off theory are not good in explaining the financing behavior of firms.

Using data from publicly traded companies in American exchange and Nasdaq, Chang and Song (2013) tested the pecking order theory with firms with financial constraints. Adopting Shyam-Sunder and Myers (1999) methodology of testing pecking order

theory and the Lemmon and Zender (2010) modified version and Frank and Goyal (2003) method of determining financing deficit under the frameworks of logit and multinomial regressions, the study finds that large deficit firms finance their deficits with equity instead of debt finance. Base on this, the study concludes that the financing behavior of American and Nasdaq firms does not follow the pecking order theory.

Rahman and Arifuzzaman (2014) also used firms from the U.K to test the trade-off and pecking order models of capital structure. Employing the Shyam-Sunder and Myers (1999) model for the pecking order theory and the trade-off theory, the results from the study neither show support for the pecking order theory nor the trade-off theory.

Also, using a time series data from American listed companies, Khan and Adom (2015) adopted the Frank and Goyal (2003) method of testing the pecking order theory to test the pecking order theory of capital structure in corporate finance. The result from the study show that firms financing behavior does not follow the pecking order theory. It was discovered that firms rather prefer equity finance to debt finance when the need for external finance arises in sharp contrast to the proposition of the pecking order theory.

Moreover, Dacosta and Adusei (2016) used secondary data to test the pecking order theory of capital structure in FTSE 350 food producers firms in United Kingdom between 2001 and 2005. Adopting the Frank and Goyal (2003) and Shyam- Sunder and Myers (1999) as well as the Ragan and Zingales (1995) to test the pecking order theory and investigate the determinants of capital structure theories respectively, the

results of the study show that the financing behavior of UK's firms is not consistent with the pecking order theory but with the trade-off theory.

Sanfilippo-Azofra et al. (2016) also used non-financial firms listed on the stock exchanges in Germany, Canada, the United States, France, Italy and the United Kingdom to investigate the coverage of financing deficit in firms in financial distress under the pecking order theory. Using the generalized method of moments, the study found that neither the pecking order theory nor the trade-off theory explains the financing decisions of both healthy and distress firms. The study did not find any evidence of hierarchical financing by firms or deficit firms issuing more debts to finance their operations.

In addition, Sokolovska (2016) used secondary data from Slovenian firms to examine the determinants of capital structure in small and medium-sized companies under the framework of panel data regression model. The results of the study did not find little evidence in support of the pecking order theory. Based on this, the study concluded that the financing behavior of Slovenian firms does not follow the pecking order theory.

Again, Gunarsih (2017) used listed firms in the Indonesian stock exchange market to examine the pecking order theory of capital structure and governing mechanism. Adopting the regression models from Shyam-Sunder and Myers (1999) and Cotei and Farhat (2008), the results from the two models show that the financing behavior of Indonesian firms does not follow the pecking order theory.

Also, Wiagustini, et al. (2017) used secondary data extracted from non-financial companies listed in the Indonesia Stock Exchange market to test the pecking order theory and trade-off theory of capital structure of firms. Employing multiple

regression analysis for the pecking order theory and the partial adjustment model for the trade-off theory, the results of the study show no evidence for the pecking order theory but provide evidence in support of the trade-off theory.

In addition, Guo et al. (2018) used panel data from Chinese listed companies to re-examine the capital structure theory of firms. Adopting the difference generalized methods of moments and system generalized methods of moments, the findings show that the financing behavior of Chinese firms follows the dynamic trade-off theory and not the pecking order theory.

Employing data from Kenyan firms, Kirui and Gor (2018) employed the Shyam-Sunder and Myers (1999) and the extended model by Frank-Goyal (2003) to investigate financial constraints and firm's financing behavior. The results from the estimation from both models show that the financing behavior of firms is not consistent with the pecking order theory.

Yuan (2018) used panel data to test whether the pecking order theory applies to Chinese listed manufacturing companies in the Shanghai Stock Exchange and Shenzhen Stock Exchange. Employing the pooled ordinary least squares and panel estimated generalized least squares regressions for the entire and subsamples analyses respectively, the results from both estimations failed to produce evidence in support of the pecking order theory.

Similarly, Bukalska (2019) used data from Polish companies to test the trade-off theory and pecking order theory under managerial overconfidence. Adopting the estimation techniques by Wronska-Bukalska (2016) for testing confidence Rajan and Zingales (1995) for testing leverage ratio, Titman and Wessels (1988), Bauer (2004) and Anderloni and Tanda (2014) methodology for testing the determinants of capital

structure, Fama and French (2002) and Ilgaz (2012) methodology of testing the trade-off theory, Shyam-Sunders and Myers (1999) Cotei and Farhat (2008) methodologies for testing the pecking order theory under the framework of Generalized methods of Moment, the results of the estimations show Polish firms financing behavior does not follow the pecking order theory. The results also show that companies run by overconfident managers use high value equity. The study concludes that Polish firms use a reversed pecking order, that is, they prefer equity to debt financing when external financing is required.

Finally, Nguyen et al. (2019) used Vietnamese firms to carry out an empirical test of capital structure theories of listed firms. The study adopted four models of testing pecking order and trade off theories from Shyam-Sunder and Myers (1999), Frank and Goyal (2003), Yu and Aquino (2009) and Razak and Rosli (2014) for the study. The panel generalized method of moments test was also adopted to test for robustness of the results. The results from the tests show no evidence that Vietnamese firms financing behavior follow the pecking order theory. Evidence was however, found in support of the trade-off theory.

In conclusion, the findings of the literature reviewed provide no evidence that show that the financing behavior of micro, small and medium enterprises follows the pecking order theory.

2.3 Chapter Summary

This chapter reviewed some theoretical and empirical literatures on firms' financing behavior. The theoretical literature that was reviewed include, the irrelevance theory, the trade-off theory and the pecking order theory. From the reviewed literature, there are enough empirical studies that provide evidence to show that the financing

behavior of micro, small and medium enterprises follow a pecking order. They are also other evidence that provide weak or inconclusive support for the theory. However, other literatures reviewed also provide evidence that show that the financing behavior of firms does not follow a pecking order. Thus, the findings on the POT are mixed depending on the study area involved, the variables used and the data set used for the study as well as the methodology that was adopted for the study. For instance, the literature reviewed showed that studies on financing preferences of firms either use the Generalized Method of Moments, Ordinary Least Squares or multiple regression techniques, logistic regression, binary regression or ordinal logistics regression. Micro, small and medium enterprises can either choose to finance their operations from internal or external sources hence, the use of logistic regression or binary regression will be adequate. When they choose to use external sources which include informal finance, semi- formal finance and formal finance which is assumed to be ordinal, the ordinal logistics regression technique will also be an appropriate method to adopt. However, an examination of firms' financing behavior which involves both discrete and ordinal variables, the use of either one of these methods cannot be adequate. To adequately measure the discrete and ordinal nature of firms' financing decisions, the use of both logistics and ordinal logistics regressions is required. Hence, this study used both the logistics and ordered logistics regressions to establish the financing behavior of MSMEs. Again, as far as the literature reviewed on this topic is concerned, the studies have either used firm's level characteristics or firm's level characteristics together with entrepreneur's demographic factors to examine firms' financing behavior. But considering the fact that government's supports to MSMEs and management trainings in the areas of records keepings, customers care management among others have implications on micro, small and

medium enterprises' financing behavior, this study has in addition to the firm and entrepreneurs' demographic factors, included government supports and management training into the model to examine MSMEs' financing behavior.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter elaborates the methodology followed in this study. It also discusses the research design, the study area, the sampling techniques, the data collection method and the estimation procedures.

3.1 Research Design

A research design is a conceptual framework within which a research work is carried out (Kothari, 1990). The study employed a cross-sectional design involving descriptive design. A cross-sectional design is an observational research which measures data of variables at a given point in time (Setia, 2016). A cross-sectional design involves the use of samples for a generalization of results to the population of a study (Omair, 2015). To Omair, (2015), a descriptive design deals with describing the characteristics of sample of a study. A descriptive research involves measuring a variable or set of variables as they exist in their natural state. It includes surveys and fact-finding enquiries of different kinds (Gravetter & Forzano, 2009, Kothari, 1990). Cross-sectional design is important for its cost effectiveness. It also avoids the problems associated with data gathered over different periods of time. This design is also beneficial for the purposes of descriptive analyses. Finally, in cross-sectional design, prior assumption of the stability of the nature of the relationship is not required before the analysis of the data. The cross-sectional design was adopted

because the study involves cross-sectional data which was obtained from a randomly selected sample of 200 MSMEs in the Bolgatanga municipality. For a greater understanding of the statistical results of the study, the cross-sectional design involving descriptive research was also used.

3.2 Theoretical Framework

The theoretical framework of the study follows Shyam-Sunder and Myers (1999) framework of testing pecking order. To them, firms choose internal finance over external finance for their operations and when investment needs exceed retained earnings requiring external resources, firms choose debt over equity finance. Shyam-Sunder and Myers model was based on the following assumptions:

I. The shortfall of internal finance relative to firm's investment needs determine the amount of debt finance.

II. The amount of debt finance to be used should also reduce the cost of information asymmetry.

Based on these, it is therefore, assumed that if pecking order theory holds, firms will use debt finance simply because there is a shortfall in internal finance relative to firm's investment.

3.3 Empirical Model

The Shyam-Sunder and Myers (1999) empirical model for testing the pecking order was adopted. It is specified as follows:

$$\Delta D_{ij} = \alpha + \beta_1 DEF_{ij} + \varepsilon_{ij} \quad (1)$$

Where:

ΔD_{ij} = net debt issued

DEF_{ij} = finance deficit

α = constant and

β = coefficient for POT

ε = error term

The subscripts (i and j) stand for the ith firm's jth net debt issued and finance deficit respectively.

The model is based on the idea that firms' finance their deficits (DEF) using their cash flow implying that the company's retained earnings should be able to pay for the company's current liabilities which should be more than the assets purchases. In case of a short fall in retained earnings, the company will apply debt financing to bridge the gap.

The company finances the deficit (DEF) when it pays dividends (DIV), investment (I) and increase in the working capital (ΔWC) which is greater than the company's profit (C). The equation for financing deficit (DEF) is thus specified as follows:

$$DEF_{ij} = DIVij + \Delta WC_{ij} - C_{ij} + \varepsilon_{ij} \quad (2)$$

Where:

DEF = finance deficit

DIV = dividend payment

ΔWC = net increase in working capital

C_{ij}= operating cash flows after interest and taxes

ε_{ij} = error term

The subscripts (i and j) stand for the ith firm's jth finance deficit, dividend payment, net increase in working capital and operating cash flows after interest and taxes respectively.

Equation (2) implies that the deficit can be financed through either debt or equity financing. This is specified as follows:

$$DEF_{ij} = DIVij + I_{ij} + \Delta WC_{ij} - C_{ij} + \varepsilon_{ij} = \Delta D_{ij} + \Delta E_{ij} \quad (3)$$

Where:

ΔD_{ij} = net debt issued

ΔE_{ij} = net equity issued

The subscripts (i and j) stand for the ith firm's jth net debt issued and net equity issued respectively.

The model for testing the pecking order theory seeks to establish the fact that firms prioritize debt financing over equity financing when the need for external financing becomes unavoidable. This is also specified as follows:

$$\Delta D_{ij} = DIV_{ij} + I_{ij} + \Delta WC_{ij} - C_{ij} + \varepsilon_{ij} \quad (4)$$

$$\Delta D_{ij} = \alpha + \beta_{po} DEF_{ij} + \varepsilon_{ij} \quad (5)$$

The model for examining the financing preference of firms follows the pecking order theory and it is thus, specified as below:

If POT holds, then, $\alpha = 0$ and $\beta = 1$

The model predicts a direct relationship between net debt issue (ΔD_{ij}) and deficit finance (DEF_{ij})

3.4 Definition and Description of Variables

3.4.1 Dependent variable

The dependent variable was financing ~~options which is~~options which are either internal or external financing. The dependent variable for the logit model is assumed to be discrete and dichotomous, hence logit model was employed.

When a firm decides to go for external financing, the source becomes ordinal because external financing can be sourced from different options such as informal, semi-formal and formal sources. Therefore, ordered logit model was also estimated. According to Awlachew and Motumma (2017), firms prefer informal sources over semi and formal sources when the need for external financing arises because it is less costly and easily accessible than the semi-formal and bank loans respectively. The informal sources of finance include; the use of entrepreneur's own resources such as gifts, inheritance, and sale of personal property, supplier's credit, bootstrap, among others. The semi-formal sources include trade credit, 'susu', credit programs of NGOs among others. Whereas, the formal sources include bank loans, shares and equity funds from stock markets.

3.4.2 Intercepts:

The $\beta 0$s are the constants or the intercepts in the respective regression models

3.4.3 Coefficients:

The β_1 β_2 $\beta_3 \ldots \beta_{12}$ are the parameters for the respective independent variables in the logistics and ordered logistics regression models respectively.

3.4.4 Independent variables

Entrepreneur's characteristics:

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The entrepreneur's characteristics of micro, small, and medium enterprises relate to gender, age and educational level. A Study by Abor, (2008) shows that gender of entrepreneurs influences the financing behavior of small and medium enterprises. The study by Ogubazghi and Muturi (2014) also shows that the age of entrepreneur explains the financing behavior of micro, small and medium firms. To Chinonso and Zhen (2016), entrepreneur's educational level, managerial competency, entrepreneur's age and gender are determinants of small and medium enterprises financing behavior. Gender is whether a person is a male or female. It is a dummy variable that takes the value 1 if respondent is a male and 0 if respondent is a female. Chinonso and Zhen (2016) and Abor, (2008) show that the gender of entrepreneurs explain firms' financing behavior because women entrepreneurs are generally reluctant to undertake risk and therefore, may undertake less debt financing. The socio-cultural factors of the study area largely make it difficult for women to own tangible assets like land and other landed properties (house) which can be used as collateral for loans but allow their male counterparts to own such assets. It is thus, expected that more men would undertake debt financing than women. Therefore, it is hypothesized that gender of entrepreneur would correlate directly with firm's financing behavior ($\beta i > 0$).

Entrepreneur's age:

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To Chinonso and Zhen (2016), entrepreneur's age is a determinant of firms' financing behavior. According to them, older entrepreneurs usually desire to have absolute control of their businesses hence are usually more interested in using internal resources in order to avoid losing control of their businesses to others. Banks lend more to young entrepreneurs because they are more energetic and innovative than

older entrepreneurs and therefore, are less likely to default. Following these, the relationship between entrepreneur's age and firms' financing behavior is expected to be negative ($\beta_i < 0$).

Entrepreneur's educational level

According to Densil (2010), owners' educational level enhances their ability to keep proper records which can enable them acquire bank loans. Owners with at least basic education background know the importance of information in financing decision. Therefore, firms whose owners have at least a basic education background are expected to operate more formally than those without any formal education. To Diabate et al., (2019), owners of SMEs with formal education backgrounds are able to manage the business well which promotes firms growth. Since education promotes firms' ability to operate formally which is a prerequisite for bank loans. It is therefore, expected that the level of education of the entrepreneur would have a positive correlation with firms' leverage (that is $\beta_i > 0$).

Capacity building and institutional supports (capacity training, impact of institutional supports and firm's management training)

Training and workshops from institutions such as NBSSI, GTA and NGOs sharpen the skills and competencies of owners and managers on current best practices. This has a similar effect of making firms operate more formally which increases their ability to access bank loans. According to Fourati and Affes (2013) and Wang, et al. (2011), firms which operate formally use more external or debt financing. These institutions also assist owners of MSMEs to identify and access services of banks with favorable loans conditions. In view of this, it is expected that this variable would also correlate directly with the dependent variable (that is, $\beta_i > 0$).

Location:

Firms which are located in urban areas use more debt financing than those located in the rural areas because they have easy access to banks and other financial institutions (Abor, 2008). Location is therefore, expected to be positively correlated with debt financing (that is, $\beta_i > 0$).

Firm's age:

Measures the number of years the firm has been in existence (Burgstaller & Wagner, 2015 and Abor, 2007). In line with Seens' (2013) classification, firms which have been operating for a period of between 0-3 years (that is $i \leq 3$) were classified as 'New' firms. Those that have existed or operated for a period between 4-10 years (that is $4 \leq i \leq 10$) were also classified as Established firms whereas, business units that have been operating for more than 10 years (that is, $i \geq 11$) were referred to as Matured firms.

Age is used to measure the reputation of firms (Abor & Biekpe, 2009). Older firms are likely to use debt financing because of status and the fact that people can attest to their behaviors while new firms are likely to use internal finance because of the fact that they do not have enough good reputation which people can attest to. According to Burgstaller and Wagner (2015) and Palacin-Sanchez, et al. (2013), firm's age relates to its leverage. In view of this, older firms' financing behavior is expected to have a positive correlation with external or debt financing whereas, the financing behavior of the new ones is more likely to relate negatively with external or debt financing .

Firm's sSize:

The number of employees determines firm's size (Awlachew & Motumma, 2017, Kira, 2013 and Densil, 2010). In this regard, enterprises with employees or

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apprentices ranging from 1-5 were referred to as micro enterprises while those with employees ranging from 5-21 were also regarded as small enterprises. Enterprises with employees or apprentices of more than 21 were considered as medium enterprises (Sceulovs & Gaile-Sarkane, 2012. Pg. 1237). According to the POT, small firms without much internal resources to finance investments resort to external finance with larger ones using internal finance. In view of this, the financing behavior of smaller enterprises is expected to correlate positively with external finance whereas that of the larger ones will relate indirectly to external finance (that is $\beta_i > 1$).

Financial viability~~:~~

Profit ~~status of the firm or its past and present sales growth were~~status of the firm or its past and present sales growth was used as proxies for financial viability. In line with the prediction of the POT, which stipulates that surplus firms will plough back profits, the financing behavior of firms is expected to correlate negatively with their profit (that is, $\beta_i < 0$). Thus, the more financially viable the firm is, the more likely its financing choices will follow the pecking order theory.

Management training

Is training activity that focuses on improving managers skills. It includes training on skills such as communication which enhances team work and improves relationship with the customers and employees they manage. The financing behaviour of firms is expected to relate directly to this variable (that is, $\beta_i > 0$). Marketing and customer care management were used as proxies to measure this variable

Government support:

Financial (credit facilities), technical and advisory services from governmental institutions such as the MASLOC, NBSSI, Ghana Tourism Authority to MSMEs were

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used to measure this variable. Such supports enhance the efficiency and competences of entrepreneurs which enable them to operate with best accounting and management practices. This increases the ability of firms to access bank loans for their operations. In line with the proposition of the pecking order theory, it is expected that this variable would also relate positively with firms' financing preference behavior ($\beta_i > 0$).

Variable	Definition	Measurement	Expected sign
Finance	Dependent	Internal/external finan	
Dv1	Dependent	Informal/semi/formal	
Gender	male/female	Male/female	+
Location	Place of operation	Rural/urban	+
Capacity building	Training/workshops	Training/workshops	+
Entrep. age	Owner's age	How old owner is	-
Entrep. Edulevel	Owner's educ. Grade	Basic/sec/tertiary	+
Firm's age	Age of business	Years in operation	+
Firm's size	Size of business	Employees/apprentice	+
Profitability	Financial position	Previous/current sales	-
Fmagt/training	Customer/Marketing Mgt training	Customer/Marketing Mgt training	+
Gov't's support	Aids from gov't	Financial/technical	+

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3.5 Study Area

The study was conducted in the Bolgatanga Municipality in the Upper East Region of Ghana. Upper East region is one of the sixteen (16) regions of Ghana. Its capital is Bolgatanga which is bordered to the north by the Bongo district, south by the Talensi district, east by the Nabdam district and to the west by the Kassena- Nankana West District. The municipality has a total population of 131,550 which accounts for 12.6% of the population of the Upper East Region (1,046,545). It has a male population of

62,783 which constitutes 47.7% while the female population stands at 68,767 which is 52% of the total population (GSS, 2014).The occupation of the people in this municipality includes, farming in cereal and leguminous crops (millet, rice, maize, guinea corn, groundnuts and cowpea). Majority of the inhabitants also engage in craft works such as smocks and basket weaving and other trading activities. This therefore, made it appropriate for the study to be conducted in the area.

3.6 Population

The population for the study was all owners of micro, small and medium enterprises. The target population for the study was however, all registered micro, small and medium enterprises (MSMEs) in the Bolgatanga Municipality of the Upper East Region. These enterprises engage in agri-business, manufacturing and processing activities as well as the provision of services. Those in the agri-business sell livestock such as pigs, fowls, guinea fowls, goats and sheep. The manufacturing and processing activities involved food processing, water production, leather works, soap making, wood and metal works, bakery, smocks and basket weavings among others. Some also provide hospitality services like hotels and guest houses. Others also provide other services such as dress making, hair dressing and carpentry. These MSMEs had employees ranging from one to over twenty employees.

3.7 Sample Size

A sample size of two hundred (200) respondents was selected from three hundred and sixty seven (367) registered MSMEs with the Bolgatanga Municipal Assembly's office of the National Board for Small Scale Industries (NBSSI), and the Ghana Tourism Authority (GTA) respectively for the study. In determining the sample size

for the study, Yamane (1967) formula for sample size was followed. It is specified as below:

$$n = \frac{N}{1+N(e)^2}$$

Where:

n= required sample size

N = Size of the population

e = margin of error which is given as 0.05

Following the formula;

$$n = \frac{367}{1+367(0.05)^2}$$

$$n = \frac{367}{1 +0.9175}$$

$$n = \frac{367}{1.9175}$$

n=191.3950

This means that the sample size for the study should be 191 respondents. However, to take care of the likelihood of non-responses to the questionnaire, the sample size was increased to 200.

To check for the adequacy of the chosen sample size, Green (1991) model of checking sample size adequacy was used. According to Green (1991), the sample size (n) for a study must be greater than 50 + 8p (where p stands for the number of explanatory variables). Eleven (11) explanatory variables were used in the empirical

model for this study. This gives 138 which is less than the 200 sample size chosen for the study. This thus shows that the 200 sample size is large enough to help produce credible results for this study.

3.8 Sampling Technique

The simple random sampling technique was employed to select the respondents based on the lottory method. This technique was adopted because it provides equal opportunity for each of the respondents to be selected. The sampling frame was the list of registered micro, small and medium enterprises. In the selection process, the enterprises in the frame were numbered. These numbers were used as reference numbers which were written in a well cut out pieces of papers. These papers were gently folded, put into a container and shaken. Two hundred (200) of these papers were then randomly picked one after the other without replacement. MSMEs whose reference numbers corresponded to papers picked, were then written down and the owners of these enterprises contacted, the purpose of the activities were explained to them and a date was booked with them for instrument to be administered.

3.9 Research Approach

The study employed a quantitative research method. According to Haq (2015), quantitative research involves the collection of numerical data and using statistical methods to analyze it in order to explain a research problem. The study involves statistical or numerical data which was obtained through a structured questionnaire. The quantitative method was adopted for the study because it is the most appropriate and efficient method in analyzing numerical data.

3.10 Research Instrument

The instrument used for the study was questionnaire. The questionnaire contained closed ended questions. The closed ended questions were asked to get specific information on the objective of the study. –The questionnaire helped to obtain quantitative data for the study. This therefore, made the use of the questionnaire but not the interview guide, a more suitable instrument for this study. The questionnaire was made up of seven (7) sections. The first section dealt with respondents' demographic characteristics, the second contained questions on firms' sources of finance while the third section contained questions on preference ordering behavior. The forth section on the other hand, presented questions on firms characteristics whereas, the fifth sections focused on firms' income. The sixth and seventh sections contained questions on firms' records keepings, institutional and governmental supports to MSMEs respectively.

3.11 Data Collection

The researcher sought the assistance of eight (8) other persons in the administration of the instrument. The data used for the study was collected directly by either administering the questionnaire to owners or managers of MSMEs or giving it out for them to complete at their own convenience. The direct administration was done to ensure that a high rate of response or return rate was achieved. The latter was also done to avoid inconveniencing respondents.

3.12 Estimation Techniques

The logistic regression technique was used to estimate the determinants of firms' financing options behavior.

Logistic Regression Model

The model for this study followed Kalash (2019) and Menike (2015) which is stated as follows:

$$Log(Y) = \ln\left(\frac{\pi}{1-\pi}\right) = \beta_O + \beta_i (X_{ij}) \quad (6)$$

Where:

Y is a dummy variable representing financing preference behavior (internal = 0 and external finance = 1).

π is the probability of microenterpreneur i choosing financing option j.

X_i denotes the control variables. This indicates entrepreneur and firm's level characteristics and government factors affecting firm's financing preference behavior.

The coefficient β is the parameter to be estimated.

If micro, small and medium enterprises choose;

a) Internal financing, then, $Y \leq 0$

b) External financing $0 < Y \leq \mu_1$

The logit model was estimated with the following equation:

$$Y_{ij} = \beta_0 + \beta_1 Gen + \beta_2 Loc + \beta_3 Captrain + \beta_4 Entrepage + \beta_5 Edulevel + \beta_6 Fage + \beta_7 Fsize + \beta_8 Dsales + \beta_9 Dsales2 + \beta_{10} Fmagt + \beta_{11} Gsup1 \quad (7)$$

Where:

Gen = Gender

Loc = Location

Captrain = Capacity training

Entrepage = Entrepreneur's age

Edulevel = Entrepreneur's level of education

Fage = Firm's age

Fsize = Firm's size

Dsales = Previous sales

Dsales2 = Current sales

Fmagt = Firm's management training

Gsup1 = Government support

Intercept= β_0

Coefficients = β_1, β_2 ... β_3 are the coefficients for the independent variables respectively.

Ordered Logistic Regression Model

The ordered model on the other hand, was adopted from Osei-Assibey et al., (2010). The ordered logit model depends on cumulative logit which is also based on cumulative probability (C_{ij}). The cumulative probability is defined as the probability that the **i**th firm is the **j**th (higher financing category):

$$Cij=Pr\ (y_i \leq j) = \sum_{k=1}^{j}[Pr(y_i)]=K \quad (8)$$

Transformation of cumulative probability into cumulative logit gives:

$$\text{logit}(C_{ij}) = \log\left(\frac{C_{ij}}{1-C_{ij}}\right) \quad (9)$$

Linearization of equation (5) gives:

$$\log(C_{ij}) = \alpha_{ij} + \beta x_{ij} \quad (10)$$

The coefficient, β means that a one-unit increase in the independent variable will result in an increase in the log-odds of being higher than category j. Based on this, the determinants of firms' preference options behavior equation was specified as:

$$Y*_{ij} = \beta x_{ij} + \varepsilon \quad (11)$$

Where Y^* is the variable representing the unobserved likelihood of microenterpreneur i choosing higher external financing j. The variable x is a vector of explanatory variables representing firm's level characteristics, entrepreneur's characteristics and government factors affecting firm's financing preference option behaviors. The coefficient β is the parameter to be estimated.

c) Informal finance, then, $Y^* \leq 0$

d) Semi-formal finance $0 < Y^* \leq \mu_1$

e) Formal finance $\mu_1 < Y^* < \mu_2$

The μ_i's are unknown parameters that were estimated with β; where:

0= informal finance (use of personal resources, gifts from friends and relative)

1= semi-formal finance (use of trade and suppliers' credits)

2 = formal finance (credit facilities from banks and microfinance institutions)

A positive (negative) value suggests that a one unit increase (decrease) of the predictor variable increases (decreases) the odds of being in a higher financing category.

$$Y_{ij} = \beta_0 + \beta_1 Gen + \beta_2 Loc + \beta_3 Captrain + \beta_4 Entrepage + \beta_5 Edulevel + \beta_6 Fage + \beta_7 Fsize + \beta_8 Dsales + \beta_9 Dsales2 + \beta_{10} Fmagt + \beta_{11} Gsup1 \quad (12)$$

Where:

Gen = Gender

Loc = Location

Captrain = Capacity building

Entrepage = Entrepreneur's age

Edulevel = Entrepreneur's level of education

Fage = Firm's age

Fsize = Firm's size

Dsales = Previous sales

Dsales2 = Current sales

Fmagt = Firm's management training

Gsup1 = Government support

3.13 Method of Data Analysis and Presentation

After a successful data collection exercise, the obtained data was verified and edited for completeness and consistency. The descriptive statistics was first employed for evidence of theory. Tables were used to present the data for ease of understanding and analysis. The logit and ordered logit regressions were also used to analyze the determinants of financing preference options of firms.

3.14 Chapter Summary

This chapter presents the research design, methodology, study area, population, sample size and sampling technique, research approach, research instrument, data collection, estimation techniques, description of variables and method of data analysis and presentation.

RESULTS AND DISCUSSION

4.0 Introduction

This chapter presents results and analysis of results. It is in four sections. Section one presents descriptive statistics, followed by regression results and analysis. The final section presents analyses of the validity and reliability test.

4.1 Descriptive Statistics

This sections deals with the demographic characteristics of respondents. The demographic characteristics are presented in Table 1. Table 2 discusses the financing preferences of respondents while Table 3 looks at the preference ordering distributions of micro, small and medium enterprises.

Table 2: Distribution of Demographic Characteristics of Respondents

	Category	Frequency	Percentage
Gender	Male	107	53.5
	Female	93	46.5
	Total	**200**	**100.0**
Age dist.	18-35years	89	44.5
	36-45years	84	42.0
	46-60years	24	12.0
	Above 60years	3	1.5
	Total	**200**	**100.0**
Edulevel	No education	18	9.0
	Basic education	67	33.5
	Secondary education	80	40
	Tertiary education	35	17.5
	Total	**200**	**100**
Saving beh.	Sometimes	80	40.0
	Always	82	41.0
	Never	38	19.0
	Total	**200**	**100.0**
Amt saved	GHS (0-20)	96	48.0
	GHS (21-40)	12	6.0
	GHS (41-60)	24	12.0
	GHS (61-80)	2	1.0
	GHS (81-100)	38	19.0
	GHS (100^{+})	28	14.0
	Total	**200**	**100.0**

Source: Field Survey, (2019).

The results from Table 2 above, show that out of 200 respondents, more than half (107) were males which means that most MSMEs are owned by men. This revelation contradicts the women empowerment policy by government and non-governmental institutions in the northern part of Ghana. The economic and cultural conditions in the study area which do not allow women to own property is the main reason for the male dominance. The age distribution shows that majority of respondents are between 16-35 years followed by 36-46 years. This indicates that MSMEs owners are youthful and energetic. This is not surprising since micro, small and medium businesses need energy because of the hardiness of the work. The results show that about 91% of the respondents have at least basic education and can therefore, keep basic business

records and other management and marketing practices. The high number could be due to the government's policy of Free and Compulsory Universal Basic Education (FCUBE) which has, among others, led to the expansion of access to basic education as well as the increased in the number of secondary schools and universities both public and private and programs such as access course, distance or e-learning programs. The savings mobilization is very good as shown in Table 2 where firms always save on monthly basis. The results show that most of the firms save at least GHS 20 a month.

4.2 Sources of Financing

Table 3: Sources of Financing

Financing Sources	**Frequency**	**Percent**
Internal finance	153	76.5
External finance	47	23.5
Total	**200**	**100.0**

Source: Field Survey, (2019).

The results from Table 3 above show that 76.5% of the respondents mostly prefer internal finance to external while 23.5% prefer external finance source. This finding is consistent with the pecking order theory. Managers prefer internal financing to external financing due to the cost involve in raising external finance. Internal financing is affordable and cheap, reliable and easily accessible (Abor, 2008: Rodel, 2013: Jiran et al., 2012 and Daskalatis et al., 2014). This finding is not surprising because MSMEs are not able to provide good financial records to convince banks of their viability in order to access bank loans. Even if they had proper records, the very low banking penetration in the study area limits firms' access to banking services.

Table 4: Distribution of External Source of Financing

Preference ordering	Frequency	Percent
Informal sources	97	48.5
Semi-formal	54	27.0
Bank loans	49	24.5
Total	**200**	**100.0**

Source: Field Survey, (2019).

Table 4 shows distribution of external source of financing. The results from Table 4 show that 48.5% of MSMEs prefer informal source of financing, 27.0% prefer semi-formal sources whereas 24.5% prefer bank loans. Informal source is cheaper than semi-formal and bank loans respectively. Informal source is more accessible than semi- formal and bank loans because they do not require any financial reports and disclosure of other business information before access. Most managers of MSMEs usually want to have absolute control and ownership of their businesses and equally lack the ability to prepare such financial reports. Also, the strong family and social networking system in the area which provides financial and material safety net or support to members whenever they are in need, account for this outcome. Besides, the limited number of banking institutions in the study area couple with the high growth of micro and small loans savings institutions could largely account for this outcome. These results therefore, confirm Awlachew and Motumma (2017) and Osei-Assibey, et al (2012) that MSMEs prefer informal sources to semi-formal and then to bank loans which is more costly.

This conforms to the pecking order theory that firms' financing behavior is ordered from less costly to costly and more costly

4.4 3 Determinants of financing preference of firms

Table 5: Determinants of Firms' Financing Preference Behavior

Financing Behavior	Coefficients	Robust Std. Err	Prob. P > |Z|
Male (female)	[-1.4976]***	0.4246	0.000
Location (rural)	[2.2677]**	0.9275	0.014
Capacitytrain	[-1.5430]**	0.7549	0.041
Entreage	0.0818	0.2597	0.753
Edulevel (no educ)			
2. Basic educ	-0.4007	0.5421	0.460
3. Secondary educ	[-2.2378]**	0.9002	0.013
4. Post- sec.edu	-0.1174	0.4970	0.813
5. Tertiary educ	-0.3494	0.8871	0.694
Fage (new)			
2. Established	[0.8696]*	0.5113	0.089
3. Matured	[1.2980]*	0.6864	0.059
Fsize (micro)			
2. Small	0.2182	0.6523	0.738
3. Medium	[1.0952]**	0.5119	0.032
Dsales	0.6187	1.0070	0.539
Dsales2	0.3365	0.7442	0.651
Fmagt	[-0.9853]***	0.3844	0.010
Gsup1	0.5693	0.8622	0.509
_cons	-0.3106	1.8112	0.864
Regression	**Observation**	200	
	WaldChi2(18)	35.42	
	Prob > Chi2	0.0035	
	Pseudo R^2	0.1650	
Logpseudolikelihood = -91.052773			

Source: Field Survey, (2019).

Note: Reference categories are in parentheses and ***, ** and * denote 1%, 5% and 10% Significance levels respectively.

Table 5, results show that gender (women) is negatively related to firms' financing behavior which means that it is less likely to increase firms' financing preference to external source of finance. The socio-cultural structure of the society which does not allow women to own landed property such as land which can be used to source bank loans may explain this outcome. Besides, the structure of the society places all

properties of women to men to keep in trust for them. This makes the women less willing to undertake more investment opportunities which require more capital which may not be internally available but can be sourced externally.

Also, location is positively correlated with financing behavior. This means that the location of firms is more likely to increase firms' financing preference to external source of finance. The plausible explanation to this result is that firms located in urban centers have more growth opportunity and therefore, would employ more external funds for expansion.

Again, capacity building is inversely related to firms' financing preference behavior implying that more capacity building to MSMEs is less likely to increase firms' financing preference to external source of finance. The reason for this outcome is that capacity building, technical and financial supports from institutions help firms to expand output which can be sold to raise more internal revenue which firms can plough back for their activities.

Furthermore, the results show that secondary education is indirectly related to financing behavior, implying secondary education as compared to basic and no formal education is less likely to increase firm's financing preference to external source of finance. The reason for this outcome is that many of the secondary school graduates are yet beginning life and therefore, would like to have strong control of the business to monitor its progress. Besides, they do not have enough growth opportunities which require more external source of finance.

Moreover, the results indicate that established and matured enterprises are positively correlated with financing behavior. This implies that as the age of the firm increases from new to established and matured enterprise the financing preference of the firms

is likely to increase to external source of finance. Established and matured firms have a good reputation which they can leverage on.

Furthermore, the results from Table 5 reveal that medium enterprises is positively correlated with firms' financing behavior meaning that as the size of the firm increases to a medium enterprise, the financing preference of firms is more likely to increase to external source of finance. Larger firms have more growth opportunities than smaller firms and therefore, need more capital to undertake these investment activities. This may explain why they employ higher financing category (external finance).

Finally, Table 5 also indicates that firms' management training is negatively related to firms' financing behavior indicating that an increase in firms' management training is less likely to increase firms' financing behavior (external finance). Management training in record keeping and credit management makes firms more efficient and productive. As firms sell the output, they earn more revenue. This makes more internal resources available for firms to use, hence, low financing behavior (internal finance).

Table 6: Marginal Effects of Determinants of Firms' Financing Behavior

Financing Behavior	Marginal Effects (dx/dy)	Robust Std. Err	Prob. P > |Z|
Male (female)	[-0.2279]***	0.0574	0.000
Location (rural)	[0.4090]**	0.1588	0.010
Capacitytraining	[-0.2277]**	0.1114	0.041
Entreage	0.0121	0.0382	0.752
Edulevel (no educ)			
2. basic educ	-0.0590	0.0808	0.466
3. secondary educ	[-0.4019]**	0.1610	0.013
4. post- sec.edu	-0.0163	0.0688	0.813
5. tertiary educ	-0.0509	0.1360	0.708
Fage (new)			
2. established	[0.1485*	0.0924	0.108
3. matured	[0.2066]*	0.1048	0.049
Fsize (micro)			
2. small	0.0362	0.1062	0.733
3. medium	[0.1539]**	0.0653	0.018
Dsales	0.0913	0.1474	0.536
Dsales2	0.0496	0.1095	0.650
Fmagt	[-0.1454]***	0.0554	0.009
Gsup1	0.0840	0.1276	0.510

Source: Field Survey, (2019).

From Table 6, the results show that gender is negative and significant at 1% level and has approximately 23% probability of decreasing financing preference-internal source of finance among firms. This means that an increase in the number of enterprises owned by men (women) will lead to approximately 23% decrease in firms' financing preference to internal finance.

Also, location is positive and significant at 5% level and has nearly 41% probability of increasing firms' financing preference to external finance.

Furthermore, capacity building is negative and significant at 5% and has about 23% more probability of decreasing MSMEs' financing preference behavior to internal finance.

Again, secondary education is negative and significant at 5% level and has about 40% more probability of decreasing MSMEs' financing preference to internal finance.

Similarly, established and matured firms are positive and statistically significant at 10% levels respectively and have approximately 15% and 21% respectively, probabilities of increasing MSMEs' financing preference to external finance.

Also, medium sized enterprise is positive and statistically significant at 5% level and has nearly 15% probability of increasing MSMEs' financing preference to external finance.

Finally, the results indicate that firms' management training is negative and significant at 1% level. It has nearly 15% probability of decreasing the MSMEs' financing preference to internal finance in the study area.

In conclusion, the results from Table 6 indicate that location and medium sized firm variables have the highest and lowest marginal effects of 41% and 15% respectively.

4.~~5~~ 4 Determinants of Firms' Preference Ordering Behavior.

Table 7: Determinants of Firms' Preference Ordering Behavior.

Preference Ordering	Coefficients	Robust Std. Err	Prob. P > |Z|
Male (female)	[1.4976]***	0.4246	0.000
Location (rural)	[-2.2677]**	0.9275	0.014
Capacitytrain	[1.5430]**	0.7549	0.041
Entreage	-0.0818	0.2597	0.753
Edulevel (no educ)			
2. Basic educ	0.4007	0.5421	0.460
3. Secondary educ	[2.2378]**	0.9002	0.013
4. Post- sec.edu	0.1174	0.4970	0.813
5. Tertiary educ	0.3494	0.8871	0.694
Fage (new)			
2. Established	[-0.8696]*	0.5113	0.089
3. Matured	[-1.2980]*	0.6864	0.059
Fsize (micro)			
2. Small	-0.2182	0.6523	0.738
3. Medium	[-1.0952]**	0.5119	0.032
Dsales	-0.6187	1.0070	0.539
Dsales2	-0.3365	0.7442	0.651
Fmagt	[0.9853]***	0.3844	0.010
Gsup1	-0.5693	0.8622	0.509
/cut1	-0.3106	1.8112	
Regression	**Observation** 200		
	WaldChi2(18) 35.42		
	Prob > Chi2 0.0035		
	Pseudo R^2 0.1650		
Logpseudolikelihood = -91.052773			

Source: Field Survey, (2019).

Note: Reference categories are in parentheses and ***, ** and * denote 1%, 5% and 10% Significance levels respectively.

The results from Table 7 show that gender is positively related to preference ordering behavior implying that gender (female) is more likely to increase firms' preference ordering behavior from a lower financing odds to a higher odds (from informal to either semi-formal or formal finance). The women empowerment policies by the government and non-governmental organization may account for this.

The ~~results also shows~~results also show that location is negatively related to preference ordering. Meaning that, it is less likely to increase firms' preference ordering behavior from lower financing category to a higher financing category. The possible reason is that firms located in rural areas have less growth opportunities which do not require higher financing order. The low ~~number of financial institutions at the rural areas also limit~~number of financial institutions at the rural areas also limits the access of firms in these areas to higher financing sources.

Again, capacity building is directly related to firms' preference ordering behavior which implies that an increase in managers' capacity building programs are more likely to increase firms' preference ordering behavior to higher financing odds (semi-formal and formal finance respectively). The possible reason for this outcome is that supports from NBSSI and GTA in the areas of credit management, records keeping and customer care enhance firms' productivity. The higher productivity increases firms' growth opportunities requiring them to seek for higher financing sources.

Furthermore, secondary education is positively correlated to preference ordering. Implying that, it is more likely to increase firms' preference ordering to a higher financing odds that is from informal to semi-formal and formal finance respectively. Managers with secondary education are able to operate formally (keeping good business records) which is necessary for sourcing higher financing.

Again, firm's age (established and matured) is indirectly related to preference ordering. This implies that, an increase in firm's age (established and matured) as compared to new firms is less likely to increase firms' preference ordering behavior to a higher financing odd (semi-formal or formal finance). The possible explanation is that established and matured firms have large customer base

which enable them to sell more to generate more sales revenue which they can plough back.

Moreover, Table 7 reveals that firm's size (medium) is inversely related to firms' preference ordering indicating that medium sized enterprises as compares to small and micro enterprises is less likely to increase firm's preference ordering behavior (semi-formal or formal finance) in the study area. The underlying reason for this outcome may be that since larger firms have diversified portfolios, they are more likely to rely on proceeds (informal finance) from these investments to expand their activities than using higher financing order (semi-formal or formal finance).

Finally, Table 7 indicates that management training is positively correlated to preference ordering, indicating that an increase in management training is more likely to increase preference ordering to a higher financing odd (semi-formal to formal finance respectively). The plausible explanation to this is that management trainings open MSMEs' operators to new methods of production which opens up more opportunities for them thus requiring higher sources of finance.

Table 8: Marginal effects of firms' preference ordering behaviour

Preference Ordering	Marginal Effects (dx/dy)	Robust Std. Err	Prob. P > |Z|
Male (female)	[-0.2279]***	0.0574	0.000
Location (rural)	[0.4090]**	0.1588	0.010
Capacitytrain	[-0.2277]**	0.1114	0.041
Entreage	0.0121	0.0382	0.752
Edulevel (no educ)			
2. Basic educ	-0.0590	0.0808	0.466
3. Secondary educ	[-0.4019]**	0.1610	0.013
4. Post- sec.edu	-0.0163	0.0688	0.813
5. Tertiary educ	-0.0509	0.1360	0.708
Fage (new)			
2. Established	[0.1485]*	0.0924	0.108
3. Matured	[0.2066]*	0.1048	0.049
Fsize (micro)			
2. small	0.0362	0.1062	0.733
3. Medium	[0.1539]**	0.0653	0.018
Dsales	0.0913	0.1474	0.536
Dsales2	0.0496	0.1095	0.650
Fmagt	[-0.1454]***	0.0554	0.009
Gsup1	0.0840	0.1276	0.510

Source: Field Survey, (2019).

Again, to measure the effect of changes in the independent variables on the dependent variable, the marginal effects report is shown in Table 8. Table 8 shows that gender (female) is positive and significant and has approximately 23% probability of increasing preference ordering from informal finance to either semi-formal or formal finance.

Also, location is negative and significant and has nearly 41% probability of increasing firms' preference ordering from informal finance to either semi-formal or formal finance.

Capacity building is positive and statistically significant and has approximately 23% more likelihoods of increasing MSMEs' preferences ordering behavior from informal finance source to semi-formal and formal finance sources respectively.

Also, secondary education as compared to basic and no formal education, is positive and significant and has about 40% more likelihood of increasing MSMEs' preference ordering behavior from informal finance to either semi-formal or formal financing sources.

Moreover, established and matured firms as compared to new ~~firms,~~firms are negative and significant and have 15% and 21% respectively, more probabilities of decreasing firms' preference ordering behavior to either semi-formal or formal finance.

Furthermore, firm's size (medium size) is negative and significant and has approximately 15% more probability of decreasing preference ordering behavior from formal finance to semi-formal and informal sources respectively.

Finally, firm's management training is positive and statistically significant at 1% level and has nearly 15% more probability of increasing firms' preference ordering behavior from informal finance to either semi-formal or formal finance.

Overall, the results from the Table 8 show that location has the highest marginal effects on the dependent variable while established, medium sized and management training have the least marginal effects on it.

4.~~6~~ 5 Discussion of Results

4.~~6~~5.1 Determinants of firms' financing behavior

The results in Table 5 confirm gender of respondents has a statistically significant and negative effect on the firms' financing behavior. This means that more enterprises

owned by women as compare to men would employ internal finance than external finance in their financing decisions. The marginal effect indicates that, as the number of enterprises owned by women increases by 1%, MSMEs' financing preference will decrease by 23% to internal finance. This is consistent with the assertion that women are largely risk averse (Abor, 2008). The result is however, inconsistent with the findings of Fourati and Affes (2013). Though, the women empowerment policies by the government and non-governmental organizations are empowering women economically and exposing them to more growth opportunities which will make them undertake more debt financing, the socio-cultural practices generally limit women capacity to own assets which they can leverage on and therefore, make them apply internal finance in running their businesses.

The location of firms is statistically significant and has a positive impact on financing preference of firms. The positive sign means that, firms which are located in urban centers will have high preference for external finance while those located in the rural areas will prefer internal finance. The marginal effect shows that a 1% increase in the location of firms to urban center will increase firms' financing preference for external finance by 41%. This means the probability of firms applying external finance to their operation will increase by 41%. Following the high level of business activities at the urban centers, firms located in these centers are expected to generate more sales revenue which they could use for their activities hence, should have had more preference for internal finance. However, the result is not surprising because, firms located at urban centers have high demand for their products. This encourages firms to undertake debt financing to expand in order to take full advantage of the high demand. The high demand also shows the firm's ability to repay its debts. This is consistent with the findings of Kira (2013) and Hendrawan (2012).

Capacity building and institutional supports also has negative effect on firm's financing behavior and is statistically significant. This means that as managers receive more capacity building trainings, it decreases firms' financing preference behavior (internal finance) implying that these are less likely to make firms use external finance. The marginal effect is 23%. This means that if capacity building increases by 1% respectively, MSMEs' financing preference is less likely to increase from internal finance to external finance by 23%. Institutional supports in the form of assisting firms identify new markets for their products are expected to open up more investment opportunities for firms. Institutions such as NBSSI and GTA also help MSMEs identify banks with affordable loan facilities. These generally, should increase firms' desire for external finance. It is however, important to point out that institutional support in the form of financial resources and technical assistance help firms to expand output to enjoy higher profits which they can retain for their operations. This may explain the outcome of this result. This confirms the pecking order theory proposed by Myers and Majluf (1984).

Again, secondary education is negative and significant. The negative coefficient means if firms owned by entrepreneurs with secondary education increases, firms' financing preference behavior decreases to internal finance. The marginal effect implies that if secondary education is increased by 1%, firm's financing preference behavior will decrease by 40% from external finance to internal finance. This confirms the findings of Abor (2008) and Chinonso and Zhen (2016).Though entrepreneurs with secondary education background should be able to keep basic business records and other managerial practices which are required for debt financing, the plausible explanation for this outcome is that entrepreneurs with secondary

education may not have enough capacity to write good business proposals convincing enough for bank loans.

Firm's age (established and matured) equally has statistically significant and a positive impact on firms' financing behavior. The positive sign implies that as the age of the firm increases to established and matured, its financing preference increases to external finance. The marginal effects of established and matured firms show that as the firm's age increases by 1% to establish and matured, the firm's preference for external finance will increase by 15% and 21% respectively, all other things being constant. Thus, older firms prefer external finance while new firms use internal finance. The plausible explanation to this is that older firms have good reputation necessary for external finance than new firms. This finding is inconsistent with the pecking order theory which states that new firms without enough internal resources will use more external finance than internal finance whereas, older firms employ more internal finance than external finance. The results however, confirm the findings of Awlachew and Motumma (2017), Kira (2013) and Osei-Assibey, et al. (2010) who found a direct relationship between firm's ages and financing behavior.

Furthermore, firm's size (medium) was found to be statistically significant and positive implying that the size of a firm determines the financing behavior of firms. The positive sign means that a 1% increase in the size of firms to medium size will lead to 15% increase in firm's financing preference to external finance, all other things being equal. The reason is that larger firms have more customer base which enables them sell more to generate more sales revenue. This ordinarily should make them use internal finance. However, the higher sales revenue signals firms' ability to repay their loans. Besides, larger firms have more growth opportunities

which they require more money to finance. Since external funds are more adequate, it makes larger firms with more growth opportunities prefer debt financing to internal financing. This explains the outcome of this finding. This is consistent with the pecking order theory which states that smaller firms use less debt financing while larger firms use more debt financing in their operations. The result is consistent with Burgstaller and Wagner, (2015) that larger firms undertake more debt financing because they hold their assets in different portfolios and therefore are less likely to default. It also confirms the findings by Daskalakis et al, (2014), Palacin-Sanchez et al, (2013), Ni and Yu (2008), Qureshi et al. (2015), Sogorb-Mira and Lopez-Gracia (2003), Bundala (2012), Basti and Bayyurt (2019), Yulianto, et al. (2015), Tong and Green (2004) and Kira (2013) which produced a positive relationship between firm's size and leverage.

In respect to the management training, the results from Table 5 show that it is statistically significant and has a negative coefficient indicating that as managers of micro, small and medium enterprises receive more managerial training in the areas of marketing and record keepings, they are less likely to have a high preference for external finance. The marginal effects shows that all other things being equal, a 1% increase in management training will lead to 15% decrease in firm's financing preference to internal finance. Though such trainings are expected to enhance managers' ability to prepare proper financial records that could convince loans or external debt providers of their viability for the grant of funds, the result is however, not surprising because, management trainings also enhance firms' efficiency and competencies which positively affect their productivity and cash inflows thereby, enabling them to use internal finance. The result however, contradicts the expected sign as found by Fourati and Affes (2013) and Wang, et al. (2011),

4.65.4-2 Determinants of firms' preference ordering behavior

The estimation results in Table 7 further show that gender has a positive coefficient, meaning as the number of enterprises owned by women as compared to men increases, firms' preference ordering behavior also increases to a higher financing odds (from informal to either semi-formal or formal finance). This means that more women prefer semi-formal or formal finance (bank loans) than men. It has about 23% marginal effects on the dependent variable indicating that a 1% increase in enterprises owned by women as compared to men will increase the probability of firms preferring higher financing odds by 23%, all other things being equal. The result confirms the findings of Abor (2008) and Chinonso and Zhen (2016). Though, it was expected that the assertion that women are generally inward looking and are less willing to undertake more challenging ventures would make women adopt a lower financing category, the result is in sharp contrast to this assertion. The result is however, not surprising as it may be the direct result of the fact that more women are now asserting themselves and expanding the frontiers of their businesses which require debt financing. The elimination of issues of collateral securities as a pre-condition for grant of loans by many financial institutions now further explains this outcome.

The results further reveal that location is negatively related to preference ordering, implying that firms located in rural areas as compared to urban area prefer lower financing odds. The marginal effects suggests that a 1% increase in firm's location will decrease the probability of firms preferring a higher financing category by about 41% given all other variables. Even though, firms in rural locations have more opportunity to grow because of the absence of any serious competition which requires higher financing odds (bank loans), the result is not surprising because, the absence of the competition may discourage them from wanting to acquire bank loans to expand

to take full advantage of the growth thereof. Also, demand for goods and services at the rural areas are generally lower because of low incomes. This may also suggest why the firms prefer lower financing odds since formal bank loans may put pressure on them to meet the repayment deadline. The result is inconsistent with the findings of Hendrawan (2012) and Kira (2013).

Also capacity building has positive coefficients, meaning, as MSMEs receive more support and capacity building from NBSSI and GTA increase, the firms' preference ordering behavior turns to increase from informal finance to semi-formal and formal finance (bank loans) sources respectively. The marginal effect of this variable on the dependent variable is 23%. This means that a 1% increase in capacity building will increase the likelihood of firms' preference ordering behavior by 23%, if all other factors are held constant. Though, capacity buildings enhance firms' ability to operate formally which is required for semi-formal or formal finance (debt financing), the possible explanation to this outcome is that capacity building to MSMEs expose them to new production techniques which makes them more productive. The high productivity when offered for sales, leads to more internal resources hence, decreases their preference ordering behavior to informal sources.

Furthermore, secondary education as compared to basic and no formal education is positive and significant implying that it explains firms' preference ordering behavior. The marginal effect shows that a 1% increase in firms owned by entrepreneurs with secondary education, will increase the probability of firms' preference ordering behavior by 40% to formal finance (bank loans). This contradicts the findings of Abor (2008) and Chinonso and Zhen (2016). It however, confirms the finding of Ogubazghi and Muturi (2014) and Fourati and Affes (2013) who have found a positive

relationship between educational level and capital structure of firms. Though, entrepreneurs with secondary education may just be starting lives with these enterprises and may not have the reputation necessary for formal bank loans, the possible explanation to this outcome is that secondary education improves the communication competencies of entrepreneurs thereby enabling them to present a good and convincing case or business plan to debt providers for a grant of loans.

The results again show that established and matured firms as compare to new firms are significant and negatively related to preference ordering, implying that established and matured firms prefer lower financing category to higher category. They have marginal effects 15% and 21% respectively on the dependent variable meaning as the age of the firm increases by 1% to either established or matured status, firms' preference for higher financing category will decrease by 15% and 21% respectively. Though older firms have developed good reputations and relationships with debt providers which they can leverage on, the possible explanation is that such firms may have due to their long existence, either gained more profits or experience of financing their operations from more affordable sources. Besides, they may also use the good reputation to obtain trade and supplier credits which are cheaper and can help them achieve the desire growth.

Furthermore, medium sized enterprises is significant and negatively correlated with preference ordering implying that medium sized enterprises compared to small and micro enterprises prefer lower financing category. It has 15% marginal effect on preference ordering, indicating that a 1% increase in firm's size to a medium enterprise, will decrease firm's preference for a higher financing odds to lower financing category (informal finance) by 15%. This confirms the findings of Shah and

Llyas (2014), Densil (2010), Benkraiem and Gurau (2013), Baskin (1989), Osei-Assibey et al (2012) and Hendrawan (2012). Increase in firm's size signals better times for the firm and hence its ability to repay its borrowed funds. However, larger firms have diversified portfolios which make them less likely to prefer more semi-formal or formal finances (debt financing). Besides, they have large customer base which enables them to sell more and thereby, generate more sales revenue which they can plough back for their operations.

Finally, the results from Table 7 indicate that management training is statistically significant and has a positive coefficient. All other things being equal, a 1% increase in management training is more likely to increase firms' preference ordering behavior to formal bank loans by 15%. Management training in how to handle and motivate employees leads to greater output. Though this higher productivity if ~~sold,~~sold is expected to bring in more sales revenue for firm's operation, the increase in productivity is an indication of good times for the firm and therefore, serves as a good signal for higher financing odds (debt financing).

4.~~7~~ 6 Analyses of Validity and Reliability Test

4.~~7~~6.1 Reliability and validity of instrument

Reliability of a measurement procedure refers to the consistency of the measurement (Gravetter & Forzano, 2009). Validity on the other hand, refers to the extent to which the instrument or measurement procedure measures what it seeks to measure (Gravetter &Forzano, 2009 & Field, 2005). Reliability and validity are two different sides of the same coin. Reliability is a prerequisite for validity. Therefore, an instrument or measurement procedure which is reliable is equally valid (Gravetter & Forzano, 2009). To ascertain the reliability and validity of the research instrument, the

researcher employed the Factor Loading Test to test for the reliability and validity of the research instrument that was used for the data collection. The findings are as follows:

4.~~7~~6.2 KMO-Bartlett's test

This test was carried out to find out the adequacy of the sample size for the study and the correlation significance between or among the variables. The results of the test are presented in Table 8 below.

Table 9: KMO-Bartlett's Test

KMO Measure of sampling adequacy0.652		
Bartlett's test of spericity	Approx. Chi-Square	1061.169
	Df	120
	Sig.	0.000

Source: Field Survey, (2019).

The results of the test show a KMO-Bartlett's test of 0.652 representing 65.2% sampling adequacy. This means that the sample size for the study was adequate and good. The KMO-Bartlett's test of sphericity was significant at 1% level as the P<0.001 (0.000) implying that there is a single significant correlation between at least two of the items or variables used.

4.~~7~~6.3 Scree plot

The scree plot was performed as a confirmatory test for the extraction results. The results are shown in figure 1 below.

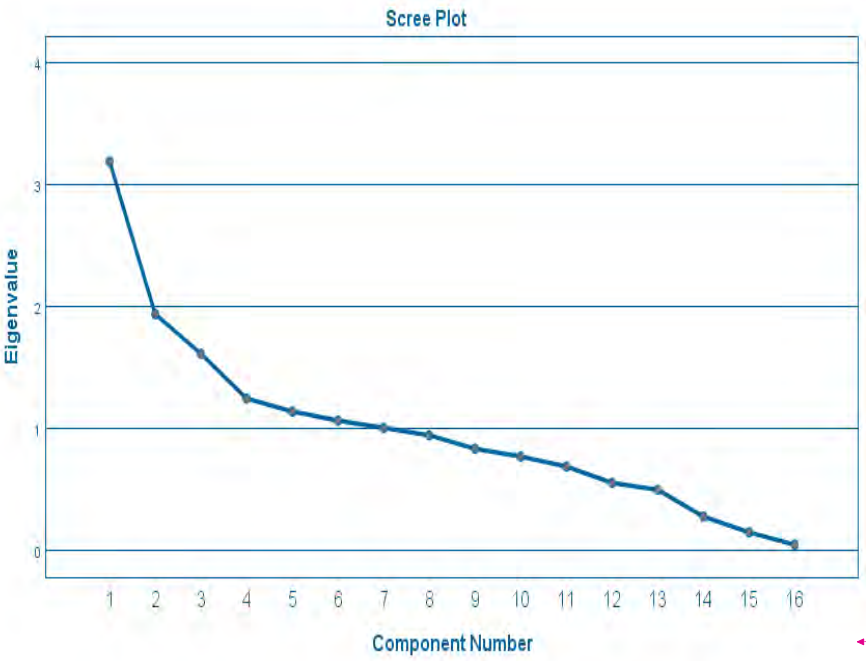

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Figure 2: Graph Showing Scree Plot

Source: Field Survey, (2019)

From Figure 2, the scree plot results also confirmed that there are seven (7) real underlying factors.

4.~~7~~6.4 Communalities

This was done to find out the extent to which the seven (7) factors account for the variance of the sixteen (16) input variables. The results are presented in Table 10 below.

Table 10: Factor Analysis- Communalities

	Initial	Extraction
Educational attainment	1.000	0.473
Train	1.000	0.750
Location	1.000	0.715
Most preferred source of	1.000	0.616
fin.	1.000	0.464
Order of preference	1.000	0.930
Fsize	1.000	0.868
NoEm	1.000	0.590
NoEmpl1	1.000	0.933
NoEmpl2	1.000	0.824
Dsal 1	1.000	0.847
Dsal 2	1.000	0.601
Salbk	1.000	0.598
Records	1.000	0.504
FTrain	1.000	0.691
Trainimpact	1.000	0.731
Macrofactors		

Source: Field Survey, (2019)

Communality, otherwise refers to as the sum of square factor loadings for the variables (h^2) shows the proportion of the variation in each variable that is explained by the underlying factors (Adam, 2015). The results from Table 10 show that none of the items showed an h^2 of less than 0.4 implying that all the variables contribute to explaining the real factors.

4.~~7~~6.5 Reliability statistics of research questions

This was done to find out how reliable the research questions were in measuring the variables of interest. The results from the reliability test show that q28, q18 and q19 as well as q29 and q30 were highly reliable as they produced Cronbach's Alpha coefficients of 0.958 and 0.804 respectively which are over and above the conventional level of 0.7. To Adam (2015), Cronbach's Alpha of more than 0.7 is acceptable. Questions 4 and 9 respectively though negatively related to the underlying factor, had a Cronbach's Alpha of 1.519. The results however, show that questions; 3,

33, 35, 40, 13, 16, 42, 27 and 59 respectively show Cronbach's Alpha coefficients of less than the conventional level of 0.7 implying that they are not too reliable. These are presented in the Tables below.

Table 11: Reliability Statistics

Cronbach's Alpha	No. of Items
0.958	3

Source: Field Survey, (2019).

Table 12: Item- Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Empl 2	2.6650	1.741	0.943	0.917
Fsiz	2.6350	1.499	0.936	0.927
NoEm	2.7400	1.862	0.872	0.968

Cronbach's Alpha	No. of Items
0.804	2

Source: Field Survey, (2019)

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Train	1.9050	0.086	-0.445	.
Location	1.0550	0.052	-0.445	.

Cronbach's Alpha	No. of Items
-1.519	2

Source: Field Survey, (2019)

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Macrofactors	2.8250	1.813	0.054	.
Educ. Attain.	2.3850	0.630	0.054	.

Cronbach's Alpha	No. of Items
0.168	3

Source: Field Survey, (2019)

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Salbk	7.0200	8.884	0.154	.140
Records	6.3900	7.998	0.195	.042
FTrain	3.4000	1.186	0.132	.472

Cronbach's Alpha	No. of Items
0.215	2

Source: Field Survey, (2019)

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Most pref.	1.7600	0.676	0.148	.
Order of pref.	1.2350	0.181	0.148	.

Cronbach's Alpha	No. of Items
-0.338	2

Source: Field Survey, (2019)

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	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Trainimpact	1.3350	0.465	-0.145	.
Empl 1	1.5400	0.591	-0.145	.

Source: Field Survey, (2019).

4.~~8~~ 7 Chapter Summary

The results of the study show that the financing and preference ordering behaviors of micro, small and medium enterprises in the Bolgatanga Municipality are consistent with the pecking order theory. The results also show that gender, location, institutional supports to MSMEs, capacity building, entrepreneur's level of education (secondary education), firms' age (established and matured), firm's size (medium) and management training are determinants of financing and preference ordering behaviors respectively of micro, small and medium businesses in the study area.

CHAPTER FIVE

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SUMMARY, ~~FINDINGS,~~ CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter presents the summary, conclusions and policy implications of the study. The chapter is divided into three sections. The first section summarizes the results and conclusions of the entire study; the second section presents the recommendations for further studies and policy implications while the third section gives the limitations of the study.

5.1 Summary

The study looked at the financing preference behavior of micro, small and medium enterprises in the Bolgatanga Municipality. The study's purpose was to examine the financing preference behavior of firms and the determinants of these financing preference behaviors. The significance of the study is that apart from its contribution to the existing body of knowledge on MSMEs' financing behavior, the study will also inform policy that will help promote the growth of MSMEs. Finally, the findings of the study will also form the basis for future research works on micro, small and medium enterprises' financing behavior. The pecking order theory which traces its roots to the 'irrelevance' theory was reviewed. The theory states that firms usually choose internal resources first to finance their activities and when these resources become insufficient, they, would then resort to external finance. The theory further posits that when the need for external finance becomes unavoidable, firm would use debt first before equity finance. The other theories that were reviewed include, the Irrelevance theory and the Trade-Off theory. The Irrelevance theory concluded that the value of firms would increase if they use more debt finance. The Trade-Off theory

on the other hand, concluded that since debt finance constitutes a trade-off between the benefits of tax shield and high debt burden, firms should strive to balance the tax benefits of debt with the risks of bankruptcy. Finally, the pecking order theory concluded that following the knowledge gap that exist between firms' managers and potential investors regarding the true value of firms, managers should apply internal funds for their activities to avoid their shares being underpriced and if the need be, they should prioritize debt over equity finance. From the empirical works on pecking order theory that were reviewed, some of the studies concluded that the financing behavior of firms follow the pecking order theory. While other studies concluded that firms' financing decision follow a pecking order out of constraints. Another ~~conclusions~~conclusion from the empirical review is that both the pecking order and trade-off theories explain firms' financing behavior.

Again, others concluded that the pecking order and trade-off theories are complementary theories and not competitive. Another conclusion from the studies is that firms' financing behavior follows a modified pecking order. In addition, some of the conclusions from the reviewed literature is that, firms have target debt ratios but make moderate adjustments to their long term target debt ratios and thus ended that both the pecking order and trade-off theories explain firms' financing behavior. Moreover, some of the empirical works concluded that firms' financing behavior does not follow the pecking order theory alone but follows the life cycle theory as well. Some also concluded that neither the pecking order theory nor the trade-off theory explains firms' financing decisions. Others also concluded that the capital structure of large firms follows the POT but that of the small companies does not follow the theory. Another conclusion from the empirical review is that the pecking order theory of firms depends on the incentive conflict and not information asymmetry. Also, other

studies concluded that neither the pecking order theory nor the financial growth cycle sufficiently explains firms' financing decisions. Another conclusion from the studies is that firms' financing choices is largely based on their indebtedness target ratio and not on the pecking order theory. Finally, some of the studies concluded firms' financing behavior does not follow the pecking order theory. The conclusions from the theoretical literature reviewed show that works on firms' financing preference behavior is still a developing issue and there is no consensus yet which requires further work. The conclusions from the empirical literature also revealed mixed results. While some of the studies found evidence to support the pecking order theory, others produced results that never supported the theory. Some of the findings were also inclusive. The findings neither supported nor contradicted the theory.

The study employed a quantitative method under the framework of a cross-sectional descriptive design. It was carried out with firms in the Bolgatanga Municipality. The study made used of cross-sectional data obtained from two hundred (200) micro, small and medium enterprises' operators in the municipality through a structured questionnaire. The respondents were sampled through the simple random sampling technique. The data was analyzed using descriptive statistics, logistics and ordered logistics regressions models to ascertain the relationship between the unobserved variable Y^* and the demographic factors, firms' characteristics, government support and other factors influencing firms' financing preference options behaviors. To this end, the major findings of the study include the following:

- It was revealed that micro, small and medium enterprises in the study area first prefer internal finance to external finance and when external finance is required, they choose informal finance over semi-formal and formal finances respectively.

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- Again, it was found that gender of entrepreneurs influence firm's financing option behaviors in the study area.
- Also, the study revealed that the location of firms also determines firm's financing preference behavior.
- In addition, the study found that capacity building such as training workshops to operators of MSMEs also influences firms' financing preference option behaviors.
- Furthermore, secondary education was also found to be a determinant of micro, small and medium enterprises' financing preference option behaviors.
- Moreover, the study again, revealed that firm's age (established and matured) determines the financing preference options behavior of MSMEs in the study area.
- Furthermore, the study showed that medium sized firms determine the financing and preference behavior of firms.
- Finally, the results of the study indicated that firm's management training also explains micro, small and medium enterprises financing preference option behaviors in the study area.

5.2 Conclusions

The conclusion from the study is that firms' prefer internal finance to external finance and when the need be for external finance, firms choose informal finance first, follow by semi-formal and formal finance similar to the proposition of the pecking order theory. It can therefore, be concluded that the financing preference behavior of firms in the Bolgatanga Municipality follows the pecking order theory. On the determinants of financing preferences, it can be concluded that gender of entrepreneurs, location, institutional supports, capacity building, entrepreneur's level of education

(secondary), firms' age (established and matured), firm's size (medium) and management training influence firms' financing preference option behaviors in the study area.

5.3 Recommendations

The results of the study have implications for policy makers and future researchers.

- For the policy makers, the results showed that management trainings for operators of MSMEs influence their financing behavior. It is therefore recommended that agencies such as the NBSSI and GTA must organize management training workshops for operators of MSMEs to enhance their ability to operate formally in order to access bank loans for their operations.

5.4 Contribution to Knowledge

The following are the contributions of the study:

- The study contributes to the existing body of knowledge on micro, small and medium enterprises financing behavior
- The researcher notes that so far as research on this subject is concerned, most of the previous work on this subject used firm's characteristics such as size, age, profitability, ownership structure, asset structure and interest sensitivity. Since most of the enterprises in Ghana receive a lot of support, both technical and financial, from the government, which is expected to promote their growth and development, thus in addition to these variables (owner and firm's characteristics), the study included capacity building and government support into the model to analyze their influence on the financing decisions of MSMEs. The inclusion of these variables adds to the body of knowledge on firms' financing preference behaviors.

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5.5 Limitations to the Study

1. Though the results of the study were robust, care must be taken in the generalization of the findings of this study because the quality of the responses from respondents could have adversely been affected by the lack of cooperation and unwillingness of some of the respondents to disclose certain information about their operations which they deemed confidential. This therefore, had the ability to compromise the validity and reliability of the results.
2. For a better understanding of the financing behavior of firms in The Bolgatanga Municipality, the entire population of micro, small and medium enterprises in the area needed to be studied. However, a sample of 200 micro, small and medium businesses was selected and studied because of inadequate financial, material and time resources.
3. Finally, the study made use of cross-sectional data which did not allow for dynamic effects.

5.6 Direction for Future Research Work

- The findings of the study were based on only empirical evidence obtained from respondents in the Bolgatanga Municipality of the Upper East Region of Ghana due to financial and time constraints. It is therefore, suggested that future researchers should consider extending the study to cover the entire country for the purpose of generalization of the findings.
- Finally, future researchers could also consider disaggregating firms into primary, secondary and tertiary sectors so as to shed more light on the financing preference of firms in each of these sectors.

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~~APPENDICES~~

Questionnaire

The responses I am eliciting from you are just mainly for academic purposes and nothing else. The researcher is conducting a research on the topic: **FINANCING PREFERENCE OF MICRO, SMALL AND MEDIUM ENTERPRISES IN BOLGATANGA MUNICIPALITY OF THE UPPER EAST REGION OF GHANA.** Your responses to this questionnaire are thus, sought to enable the researcher find evidence regarding the financing preference of micro, small and medium enterprises in the municipality. In view of this, I would wish to urge you to respond to the questions as honestly as you can. I wish to also assure you that your views or responses would be treated with the highest level of confidentiality. Pursuant to this, I would therefore, urge you not to write your name or anything that will reveal your identity on the questionnaire or to the interviewer for the purpose of this interview.

SECTION A: RESPONDENTS BIO DATA

Please tick (√) or comment where applicable

(1) Gender …….

(a) Male (b) Female

(2) What is your age as at your last birthday?

(a) 18-35 years (b) 36-45 years (c) 46-60 years (d) above 60 years

(3) What is your level of education?

(a) Basic level(b) Secondary level (c) Post-secondary (d) Tertiary level

(d) Others (specify) ……

(4) Have you attended any training program or apprenticeship course relating to your work before?

(a) Yes (b) No

(5) How long was the training program or apprenticeship course?

(a) 0-1 year (b) 1-2 years (c) 2-3 years (d) 3-4 years

Other (specify) ……..

(6) Do you manage this business with others?

(a) Yes (b) No

(7) If yes, how many managers are in charge of the business?

(a) 1 (b) 2 (c) 3 (d) 4

Others (specify) ……..

(8) How many hours do you spend daily on the business?

(a) 5 hours (b) 6 hours (c) 7 hours (d) 8 hours

Others (specify) …….

(9) Is this place rural or urban? ……

(10) How much does it cost you to transport or travel to the main Bolgatanga market? GH¢ .....

(a) Sometimes (b) always (c) never (d) save in my box

(12) If you do, how much?

(a) GH¢ 100 (b) GH¢ 200 (c) GH¢ 300 (d) GH¢ 400 (e) GH¢ 500

Others (specify) GH¢ ……...

SECTION B: FIRM'S SOURCES OF FINANCE

(13) Which of these sources of finance do you prefer most for the business?

(a) Internal sources (b) External sources

(14) Could you please explain why you prefer this source of finance?

……..

(15) At what stage of your business financing do you prefer this source you have indicated in **question 13 above?**

(a) Start-up stage (b) working capital (c) desire future financing (expansion)

(16) Could you please briefly explain why you prefer this source at this stage?

……

SECTION C: EXTERNAL SOURCES OF FINANCE

(17) If external finance is required, which of these would you prefer most?

(a) Informal sources (gifts, inheritance, etc.) (b) Trade credit, "Susu" loans

(c) Bank loans/MASLOC loans/loans from microfinance institutions

(18) Could you please briefly explain why you prefer that? ……

(19) Could you please explain briefly, why **the others** are **not** mostly preferred by you?

(a)Informal……

(b) Trade credit, "Susu", etc ……

(c) Bank loans and MASLOC or microfinance loans ……

(20) Please, kindly rank these sources of finance in order of your preference for them. Use 1 for the most preferred, 2 for the second most preferred and 3 for the least preferred. Write these codes in the brackets provided in the table.

Informal sources ( )	Trade credit, susu loans etc ( )	Loans from banks and microfinance institutions ( )

SECTION D: FIRM'S CHARACTERISTICS

(A) FIRM'S AGE

(21) For how long have you been operating this business?

(a) 0-5 years (b) 6-10 years (c) 11-15 years (d) 16+ years

(B) FIRM'S SIZE

(22) How many people work in your company/shop?

(a) 1-5 employees (b) 6-10 employees (c) 11-15 employees (d) 16+ employees

Others (specify) …….

(23) How many of these workers are paid regularly?

Please (specify) ……

(24) How many of them are visitors or family members who come to help?

Please (specify) ……..

(C) OWNERSHIP

(25) What is the ownership structure of this business?

(a) Sole proprietor (c) family owned (c) partnership

Others (specify)…….

(26) Could you please explain briefly the reason for the choice of this ownership structure? ……

(27) Could you please, list some of the items you sell or you use for providing the services? ……...

SECTION D: FIRM'S TOTAL INCOME

(28) Is store/building rented place?

(a) Yes (B) No

(29) If yes, how much do you pay as rent?

GH¢……..

(30) If No, how much would you have collected as rent if you had rented it out?

GH¢ ……

(31) How many employees or apprentices did you start this business with?

(a) 1-3 (b) 3-4 (c) 4-5 (d) 5-6

Others (specify)…….

(32) How many are they now?

Please specify: ……

(33) How much sales do you make/ sell daily as at the initial stages of this business? Please specify: ……

(34) How much sales do you make/ sell daily currently?

Please specify: ……

(35) How have your sales or transactions been generally, for the past one year?

(a) Good (b) fairly good (c) bad (d) too bad

(36) Could you please explain why sales change? .....

(37) How many transactions did you make or items did you sell during the period?.....

SECTION E: RECORDS KEEPING

(38) How often do your family members take some of the business wares for lunch?

(a) Often (b) very often (c) not often (d) I cannot tell

(39) Do you have sales day book?

(a) Yes (b) No

(40) If yes, do you use it to cross check your Susu contributions?

(a) At times, (b) always (c) not important for that

(41) Do you keep records of your transactions?

(a) Sometimes (b) always (c) never

(42) If not always, why don't you keep records of your transactions?

(a) I don't know how to keep proper records (b) it is time wasting (c) I keep it in my head (d) I own the business, so there is no need

(43) If always, have these records ever helped you in obtaining loans or external financing for your business? (a) Sometimes (b) always (c) never (d) not sure

SECTION F: INSTITUTIONAL IMPACT AND CAPACITY BUILDING

(44) Have you heard about NBSSI? (a) Yes (b) No

(45) What do they do? ……..

(46) Has NBSSI or any other organization you have contact with ever organized any capacity training or workshop for you before?

(a) Yes (b) No

(47) If yes, what form(s) of training did you receive from it or them?

(a) Record keeping (b) credit management (c) customer care management

(d) Marketing management

(e) Others (specify) ……..

(48) What was the duration of the training? (a) one week (b) two weeks (c) three weeks (d) four weeks (e) others (specify) ……..

(49) Has this training really helped improved your business performance?

(a) Really (b) very really (c) not all that really (d) not really at all

(50) How often was this training program?

(a) Often (b) very often (c) not often (d) not very often

(51) Would you say that this training has helped you to increase your sales or trade?

(a) Agree (b) strongly agree (c) disagree (d) strongly disagree

(52) Have you ever contracted loan(s) from either MASLOC or any micro-finance institution?

(a) At times (b) always (c) never (d) can't remember

(53) If you have ever, which of these was a reason for acquiring the loan(s) from this institution? (a) Start a new business (b) expand an existing business (c) acquire new equipment (d) for use as a working capital

(e) Others (specify) ……..

(54) To what extent did this facility contribute to the growth and expansion of your business?

(a) To some extend (b) to a large extent (c) not sure (d) not at all

(55) Which of these factors influenced you to contract loans with this institution?

(a) Their loans are easy to acquire (b) my friends influenced me (c) they provide additional services

(d) Others (specify) ……..

(56) What is the performance of your business now after contracting the loan and other services from this institution? (a) Increased revenue (b) increased in productivity (c) increased in customer base

(d) Others (specify) ……..

(57) Which of these factors positively affects the performance of your business?

(a) Provision of micro loans from MFI/MASLOC (b) government intervention/support

(c) Low taxes (d) others (specify) ……..

SECTION I: GOVERNMENT SUPPORT

(58) Have you ever received any support from the government?

(a) Yes (b) No

(59) If yes, what was the nature of this support?

(a) Financial (b) materials (c) training programs (c) others (indicate): ……..

(60) Did this support really help in the performance of your business?

(a) Really (b) very really (c) not all that really (d) not really at all

THANK YOU.

APPENDIX B

logit Finance i.Gender i.Location Institutionalimpact Capacitytraining entrepage i.edulevel i.fage i.Fsize Dsales Dsales2 Fmagt Gsup1, vc

> e(robust)

Iteration 0: log pseudolikelihood = -109.04953

Iteration 1: log pseudolikelihood = -91.167594

Iteration 2: log pseudolikelihood = -89.385639

Iteration 3: log pseudolikelihood = -89.291752

Iteration 4: log pseudolikelihood = -89.291272

Iteration 5: log pseudolikelihood = -89.291272

Logistic regression — Number of obs = 200

Wald chi2(17) = 40.29

Prob > chi2 = 0.0012

Log pseudolikelihood = -89.291272 — Pseudo R2 = 0.1812

Finance	Coef.	Robust Std. Err.	z	P>|z|	[95% Conf.	Interval]
2.Gender	-1.471349	.4293354	-3.43	0.001	-2.312831	-.6298667
2.Location	2.188629	.9172299	2.39	0.017	.3908919	3.986367
Institutionalimpact	-2.501507	1.241486	-2.01	0.044	-4.934774	-.0682402
Capacitytraining	-1.601599	.8662847	-1.85	0.064	-3.299485	.0962884
entrepage	.0483809	.2669386	0.18	0.856	-.4748091	.5715709
edulevel						
2	-.4720077	.5512802	-0.86	0.392	-1.552497	.6084816
3	-2.617179	1.002018	-2.61	0.009	-4.581099	-.6532585
4	-.1213541	.5047134	-0.24	0.810	-1.110574	.8678659
5	-.4185275	.8731913	-0.48	0.632	-2.129951	1.292896
fage						
2	.8989521	.5218267	1.72	0.085	-.1238095	1.921714
3	1.360882	.6883254	1.98	0.048	.0117894	2.709975
Fsize						
2	.2693487	.7013338	0.38	0.701	-1.10524	1.643938
3	1.030473	.5059023	2.04	0.042	.0389224	2.022023
Dsales	.1100741	1.107261	0.10	0.921	-2.060118	2.280266
Dsales2	.1872555	.6153002	0.30	0.761	-1.018711	1.393222
Fmagt	-1.191654	.4479112	-2.66	0.008	-2.069544	-.3137646
Gsup1	-.4520834	.5706215	-0.79	0.428	-1.570481	.6663141
_cons	4.24745	2.977718	1.43	0.154	-1.588771	10.08367

logit Finance i.Gender i.Location Institutionalimpact Capacitytraining entrepage i.edulevel i.fage i.Fsize Dsales Dsales2 Fmagt Gsup1, vc

> e(robust) or

Iteration 0: log pseudolikelihood = -109.04953

Iteration 1: log pseudolikelihood = -91.167594

Iteration 2: log pseudolikelihood = -89.385639

Iteration 3: log pseudolikelihood = -89.291752

Iteration 4: log pseudolikelihood = -89.291272

Iteration 5: log pseudolikelihood = -89.291272

Logistic regression Number of obs = 200

Wald chi2(17) = 40.29

Prob > chi2 = 0.0012

Log pseudolikelihood = -89.291272 Pseudo R2 = 0.1812

Finance	Odds Ratio	Robust Std. Err.	z	P>|z|	[95% Conf.	Interval]
2.Gender	.2296156	.0985821	-3.43	0.001	.0989807	.5326628
2.Location	8.922975	8.18442	2.39	0.017	1.478299	53.85887
Institutionalimpact	.0819614	.1017539	-2.01	0.044	.0071921	.9340361
Capacitytraining	.201574	.1746205	-1.85	0.064	.0369022	1.101077
entrepage	1.04957	.2801708	0.18	0.856	.6220038	1.771047
edulevel						
2	.6237487	.3438603	-0.86	0.392	.2117187	1.837639
3	.0730086	.0731559	-2.61	0.009	.0102436	.5203474
4	.8857203	.4470349	-0.24	0.810	.3293698	2.381822
5	.658015	.574573	-0.48	0.632	.1188431	3.643322
fage						
2	2.457027	1.282142	1.72	0.085	.8835481	6.832658
3	3.899633	2.684216	1.98	0.048	1.011859	15.02891
Fsize						
2	1.309112	.9181242	0.38	0.701	.3311313	5.175509
3	2.80239	1.417736	2.04	0.042	1.03969	7.553591
Dsales	1.116361	1.236103	0.10	0.921	.1274389	9.779284
Dsales2	1.205935	.7420123	0.30	0.761	.3610601	4.027806
Fmagt	.3037184	.1360389	-2.66	0.008	.1262433	.730691
Gsup1	.6363011	.3630871	-0.79	0.428	.2079451	1.947047
_cons	69.92689	208.2226	1.43	0.154	.2041765	23948.75

margins, dydx(*)

Average marginal effects Number of obs = 200

Model VCE : Robust

Expression : Pr(Finance), predict()

dy/dx w.r.t. : 2.Gender 2.Location Institutionalimpact Capacitytraining entrepage 2.edulevel 3.edulevel 4.edulevel 5.edulevel 2.fage 3.fage 2.Fsize 3.Fsize Dsales Dsales2 Fmagt Gsup1

	Delta-method dy/dx	Std. Err.	z	P>|z|	[95% Conf.	Interval]
2.Gender	-.2187022	.0578034	-3.78	0.000	-.3319948	-.1054095
2.Location	.3833911	.1543334	2.48	0.013	.0809031	.6858791
Institutionalimpact	-.3625446	.182336	-1.99	0.047	-.7199166	-.0051725
Capacitytraining	-.2321204	.1265168	-1.83	0.067	-.4800888	.015848
entrepage	.0070119	.0386088	0.18	0.856	-.06866	.0826838
edulevel						
2	-.0687158	.0814152	-0.84	0.399	-.2282866	.0908551
3	-.4571265	.1639679	-2.79	0.005	-.7784977	-.1357553
4	-.0164889	.0683012	-0.24	0.809	-.1503567	.1173789
5	-.0603314	.133047	-0.45	0.650	-.3210988	.200436
fage						
2	.1512375	.0921228	1.64	0.101	-.0293199	.3317949
3	.2126783	.1030799	2.06	0.039	.0106455	.4147111
Fsize						
2	.0433432	.1096512	0.40	0.693	-.1715693	.2582557
3	.1436259	.0646262	2.22	0.026	.0169608	.2702909
Dsales	.0159531	.1603613	0.10	0.921	-.2983493	.3302555
Dsales2	.027139	.0890692	0.30	0.761	-.1474335	.2017115
Fmagt	-.172707	.0638054	-2.71	0.007	-.2977634	-.0476507
Gsup1	-.0655207	.0832604	-0.79	0.431	-.228708	.0976667

Note: dy/dx for factor levels is the discrete change from the base level.

```
ologit dv1 i.Gender i.Location Institutionalimpact Capacitytraining entrepage
i.edulevel i.fage i.Fsize Dsales Dsales2 Fmagt Gsup1, vce(r
> obust)

Iteration 0:   log pseudolikelihood = -109.04953
Iteration 1:   log pseudolikelihood = -91.167594
Iteration 2:   log pseudolikelihood = -89.385639
Iteration 3:   log pseudolikelihood = -89.291752
Iteration 4:   log pseudolikelihood = -89.291272
Iteration 5:   log pseudolikelihood = -89.291272

Ordered logistic regression                     Number of obs   =        200
                                                Wald chi2(17)   =      40.29
                                                Prob > chi2     =     0.0012
Log pseudolikelihood = -89.291272               Pseudo R2       =     0.1812
```

dv1	Coef.	Robust Std. Err.	z	P>|z|	[95% Conf.	Interval]
2.Gender	1.471349	.4293354	3.43	0.001	.6298667	2.312831
2.Location	-2.188629	.9172299	-2.39	0.017	-3.986367	-.3908919
Institutionalimpact	2.501507	1.241486	2.01	0.044	.0682402	4.934774
Capacitytraining	1.601599	.8662847	1.85	0.064	-.0962884	3.299485
entrepage	-.0483809	.2669386	-0.18	0.856	-.5715709	.4748091
edulevel						
2	.4720077	.5512802	0.86	0.392	-.6084816	1.552497
3	2.617179	1.002018	2.61	0.009	.6532585	4.581099
4	.1213541	.5047134	0.24	0.810	-.8678659	1.110574
5	.4185275	.8731913	0.48	0.632	-1.292896	2.129951
fage						
2	-.8989521	.5218267	-1.72	0.085	-1.921714	.1238095
3	-1.360882	.6883254	-1.98	0.048	-2.709975	-.0117894
Fsize						
2	-.2693487	.7013338	-0.38	0.701	-1.643938	1.10524
3	-1.030473	.5059023	-2.04	0.042	-2.022023	-.0389224
Dsales	-.1100741	1.107261	-0.10	0.921	-2.280266	2.060118
Dsales2	-.1872555	.6153002	-0.30	0.761	-1.393222	1.018711
Fmagt	1.191654	.4479112	2.66	0.008	.3137646	2.069544
Gsup1	.4520834	.5706215	0.79	0.428	-.6663141	1.570481
/cut1	4.24745	2.977718			-1.588771	10.08367

.

```
ologit dv1 i.Gender i.Location Institutionalimpact Capacitytraining entrepage
i.edulevel i.fage i.Fsize Dsales Dsales2 Fmagt Gsup1, vce(r
> obust) or

Iteration 0:   log pseudolikelihood = -109.04953
Iteration 1:   log pseudolikelihood = -91.167594
Iteration 2:   log pseudolikelihood = -89.385639
Iteration 3:   log pseudolikelihood = -89.291752
Iteration 4:   log pseudolikelihood = -89.291272
Iteration 5:   log pseudolikelihood = -89.291272

Ordered logistic regression                     Number of obs   =        200
                                                Wald chi2(17)   =      40.29
                                                Prob > chi2     =     0.0012
Log pseudolikelihood = -89.291272               Pseudo R2       =     0.1812
```

dv1	Odds Ratio	Robust Std. Err.	z	P>|z|	[95% Conf.	Interval]
2.Gender	4.355105	1.869801	3.43	0.001	1.87736	10.10298
2.Location	.1120702	.1027942	-2.39	0.017	.018567	.6764533
Institutionalimpact	12.20087	15.14721	2.01	0.044	1.070622	139.0418
Capacitytraining	4.960956	4.297601	1.85	0.064	.9082021	27.09869
entrepage	.9527708	.2543313	-0.18	0.856	.5646378	1.607707
edulevel						
2	1.60321	.8838177	0.86	0.392	.5441765	4.723249
3	13.69702	13.72467	2.61	0.009	1.921793	97.62158
4	1.129025	.5698338	0.24	0.810	.4198466	3.036101
5	1.519722	1.327008	0.48	0.632	.2744748	8.414454
fage						
2	.4069959	.2123814	-1.72	0.085	.1463559	1.1318
3	.2564344	.1765103	-1.98	0.048	.0665384	.9882798
Fsize						
2	.7638768	.5357326	-0.38	0.701	.1932177	3.01995
3	.3568382	.1805253	-2.04	0.042	.1323874	.9618253
Dsales	.8957677	.9918489	-0.10	0.921	.102257	7.846896
Dsales2	.8292318	.5102265	-0.30	0.761	.2482741	2.769622
Fmagt	3.292524	1.474758	2.66	0.008	1.368568	7.921213
Gsup1	1.571583	.8967791	0.79	0.428	.5135982	4.808961
/cut1	4.24745	2.977718			-1.588771	10.08367

```
margins,dydx(*)
```

Average marginal effects Number of obs = 200

Model VCE : Robust

Expression : Pr(dv1==1), predict()

dy/dx w.r.t. : 2.Gender 2.Location Institutionalimpact Capacitytraining entrepage 2.edulevel 3.edulevel 4.edulevel 5.edulevel 2.fage

3.fage 2.Fsize 3.Fsize Dsales Dsales2 Fmagt Gsup1

	Delta-method dy/dx	Std. Err.	z	P>|z|	[95% Conf.	Interval]
2.Gender	-.2187022	.0578034	-3.78	0.000	-.3319948	-.1054095
2.Location	.3833911	.1543334	2.48	0.013	.0809031	.6858791
Institutionalimpact	-.3625445	.1823361	-1.99	0.047	-.7199167	-.0051723
Capacitytraining	-.2321203	.1265168	-1.83	0.067	-.4800887	.0158481
entrepage	.0070119	.0386088	0.18	0.856	-.06866	.0826838
edulevel						
2	-.0687158	.0814152	-0.84	0.399	-.2282866	.0908551
3	-.4571265	.1639679	-2.79	0.005	-.7784977	-.1357553
4	-.0164889	.0683012	-0.24	0.809	-.1503567	.1173789
5	-.0603314	.133047	-0.45	0.650	-.3210988	.200436
fage						
2	.1512375	.0921228	1.64	0.101	-.0293199	.3317949
3	.2126783	.1030799	2.06	0.039	.0106455	.4147111
Fsize						
2	.0433432	.1096512	0.40	0.693	-.1715693	.2582557
3	.1436259	.0646262	2.22	0.026	.0169608	.2702909
Dsales	.0159531	.1603613	0.10	0.921	-.2983492	.3302554
Dsales2	.027139	.0890692	0.30	0.761	-.1474335	.2017115
Fmagt	-.172707	.0638055	-2.71	0.007	-.2977634	-.0476506
Gsup1	-.0655206	.0832604	-0.79	0.431	-.228708	.0976667

Note: dy/dx for factor levels is the discrete change from the base level.